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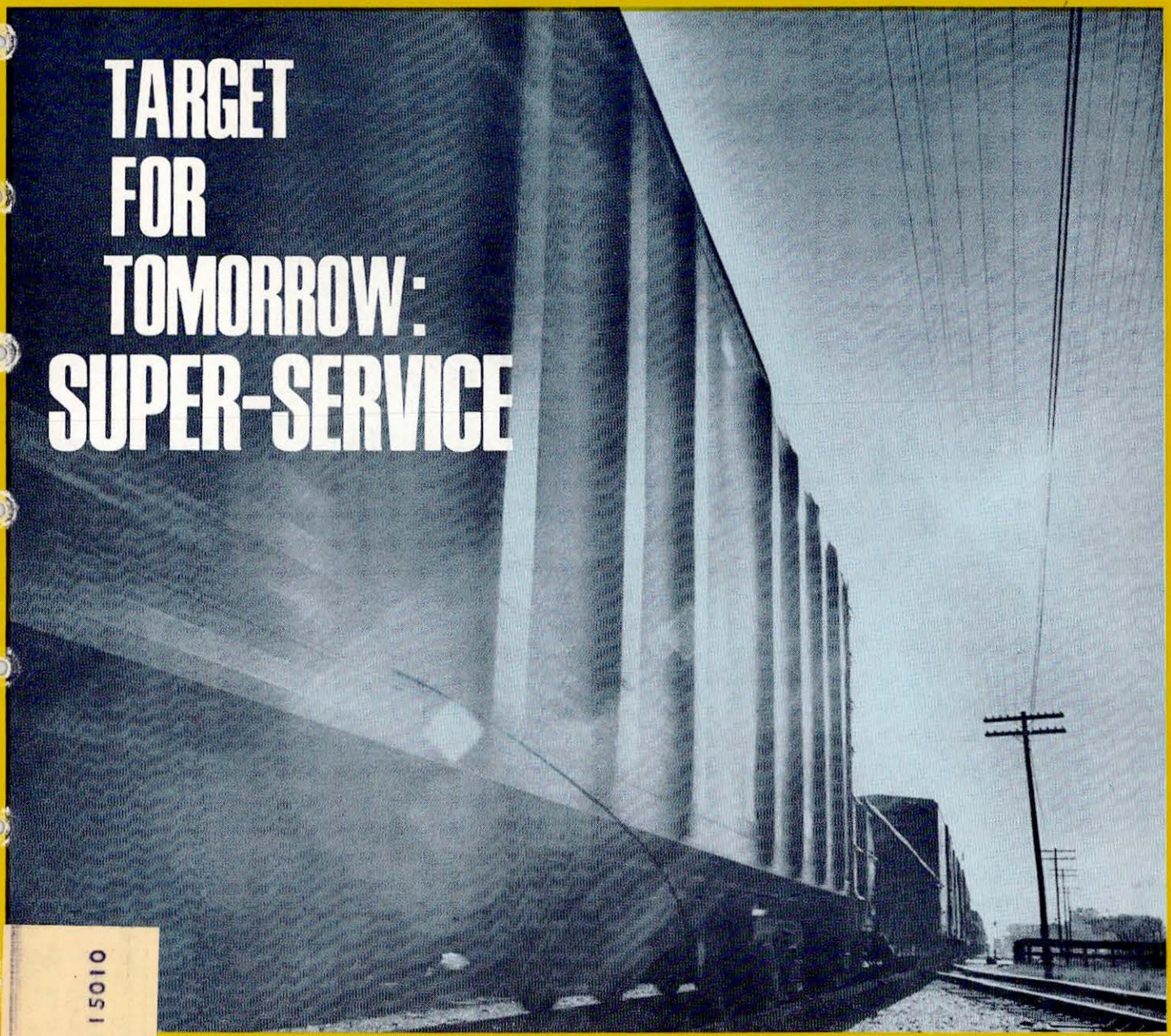

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No. 5

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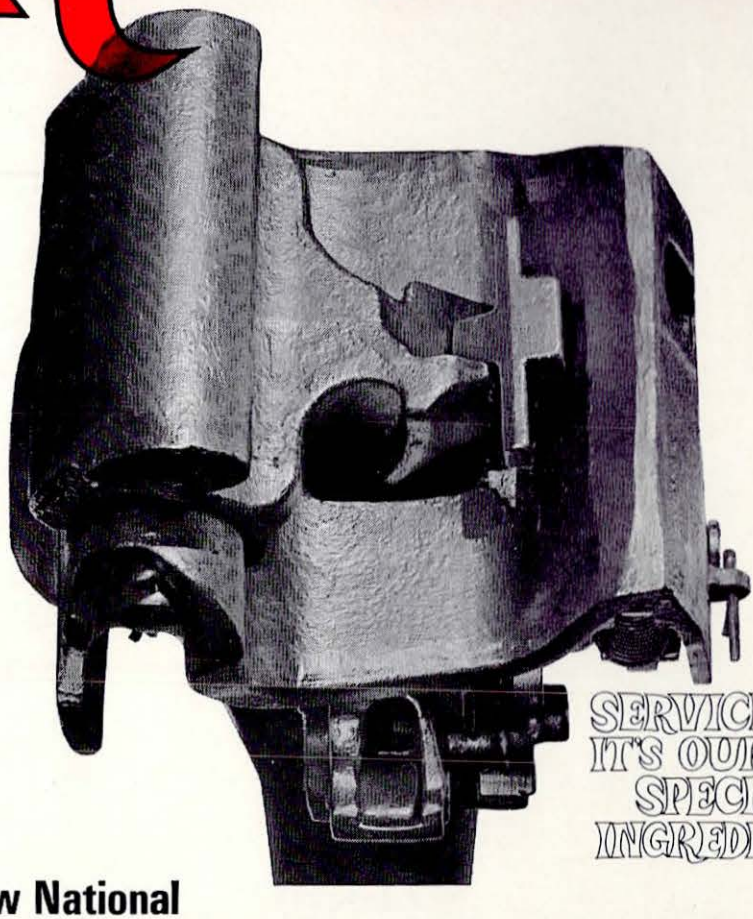

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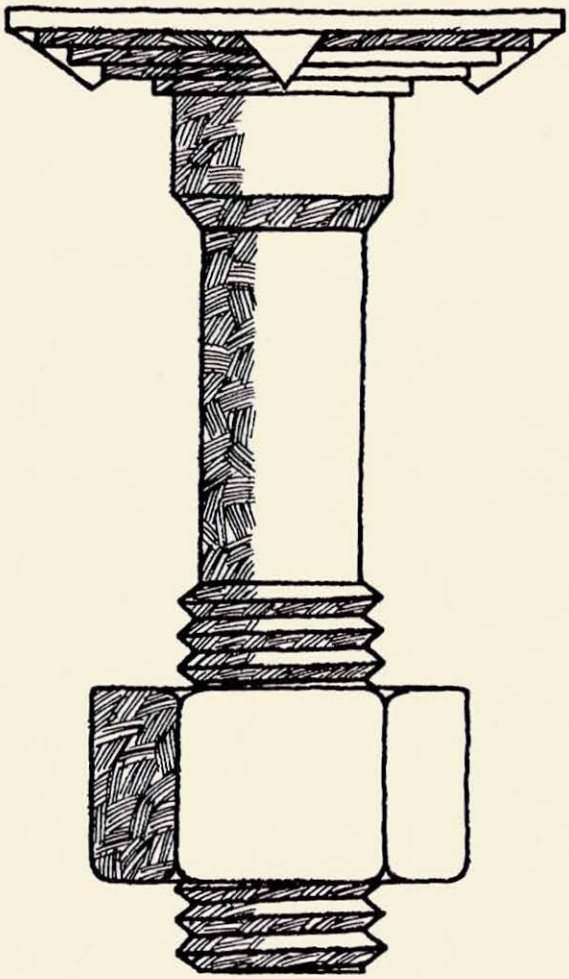

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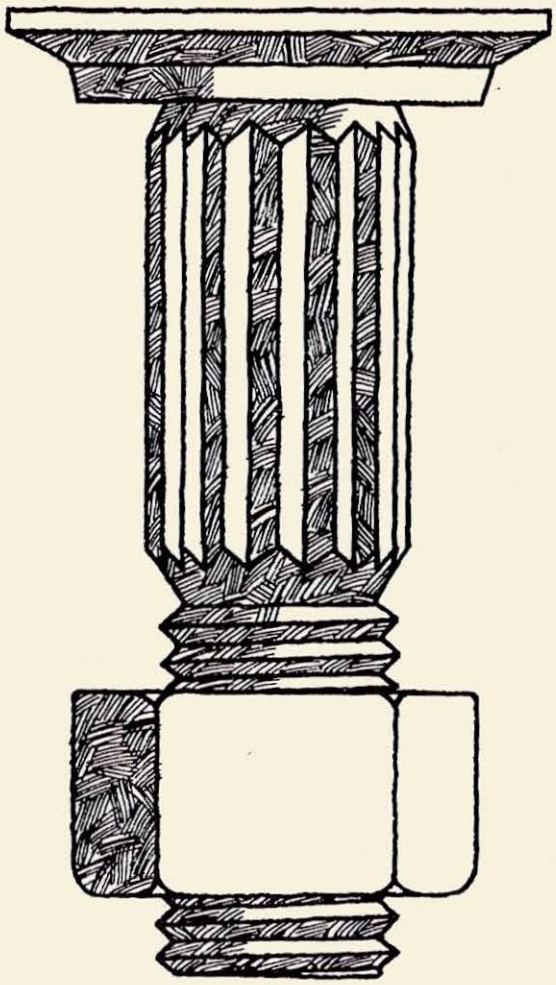

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The first occurred in 1869; the second is already under way.

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. . . AND COMING NEXT WEEK

The May 26 issue of Railway Age will feature a special report on the latest developments in piggyback service and equipment. The May Traffic Poll will be devoted to comments upon piggyback, pro and con, by a cross section of prominent shippers. Also, in an exclusive interview, Frisco President Richard C. Grayson will describe the past, present and future of his railroad's service-improvement programs. Like all Freight Traffic issues, this one will go to 10,000 industrial traffic managers in addition to our regular subscription list.

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SHORT AND SIGNIFICANT

Service charges would yield $50 million

Public hearings will be held in St. Louis June 9-12 on 21 railroad proposals for new service charges that would yield an estimated $50 million a year. A decision on whether to make a filing with the ICC will follow these hearings. The proposals have a two-fold purpose—(1) to delay a new general rate-increase proceeding and (2) to encourage more efficient use of cars by shippers. The proposals include higher charges for grain transit and for the handling of export-import traffic. Shipper opposition is expected.

Railroads fight Indianapolis city ordinance

Indianapolis city officials apparently have their own ideas about how to "encourage" railroads to run short trains. The city has a new ordinance on blocking of grade crossings which, in effect, would limit the length of trains operating in the city to fewer than 30 cars. Six railroads have gone to U.S. district court asking that the ordinance be declared unconstitutional. In the meantime, the city has agreed not to enforce the law (which was to have become effective May 14). By the railroads' estimates, compliance would cost them tens of millions of dollars for additional facilities and additional crew and operating expenses.

Car-shortage study planned by Whitman

Federal Railroad Administrator Reginald N. Whitman last week asked contractors to submit proposals for a research study covering: (1) assessment of the economic effects of freight-car shortages at different levels; (2) determination of effects of shortages involving certain commodities; and (3) forecasting freight-car demand on a weekly basis for specific commodities. Deadline for proposals is June 24.

RI checking commuter aid possibilities

Another Chicago-area commuter line —Rock Island—is exploring the possibilities of upgrading its car fleet with federal aid, through formation of a mass transit district. RI representatives at an Illinois Commerce Commission fare-structure hearing confirmed that discussions have begun, but are still in a preliminary stage. With 20 bi-level coaches acquired several years ago and 10 more on order now, the road would need 42 additional units of equipment to be able to replace all older cars in service. First Chicago road to go the transit-district route to equipment replacement was Illinois Central; Burlingon and Chicago South Shore & South Bend, like Rock Island, are considering similar moves.

Transit-aid tax proposal is rejected

For a few days, Chicago Transit Authority had high hopes that the Illinois legislature would look kindly on a proposal to aid public transit systems with funds raised via a special gasoline tax. Then, a House committee dashed the hopes, rejecting the plan by a 16-12 vote. The transit-aid tax would have had a two-cents-per-gallon limit (RA, May 10, p. 12). House committee members said they sympathized with CTA and its needs. But they also indicated that they could not support a special gas tax, when the governor was already proposing a 2.5-cents-per-gallon tax to be levied statewide. Another CTA fare increase now seems likely —even though two increases in the past two years have pushed the base fare to 40 cents.

EL adopts 24-hour clock

The 24-hour clock, in use by the military for many years, has found favor in the eyes of at least one eastern railroad, the Erie Lackawanna. Fred Diegtel, vice president-operations, says that each dispatcher's office is now equipped with the new clocks and that all trains are being dispatched under the new system. However, while operating timetables have been revised to handle the 24-hour clock, public passenger timetables will continue to use the conventional a.m.-p.m. designations.

MONDAY MORNING REPORT

ICC GETS HILL HEAT ON CAR SHORTAGE

Does the Interstate Commerce Commission already have enough power to do what's needed to ease the freight car shortage? Yes, but ICC has failed to use it, say members of the Senate Commerce Committee, especially Warren G. Magnuson (D.-Wash.), committee chairman, and Vance Hartke (D.-Ind.), surface transportation subcommittee chairman. No, but ICC has done its best with the power it has, say Virginia Mae Brown, ICC chairman and Robert W. Ginnane, general counsel. The opinions came out—sharply—at a hearing last week before Sen. Hartke.

ICC: WE NEED MORE STUDY

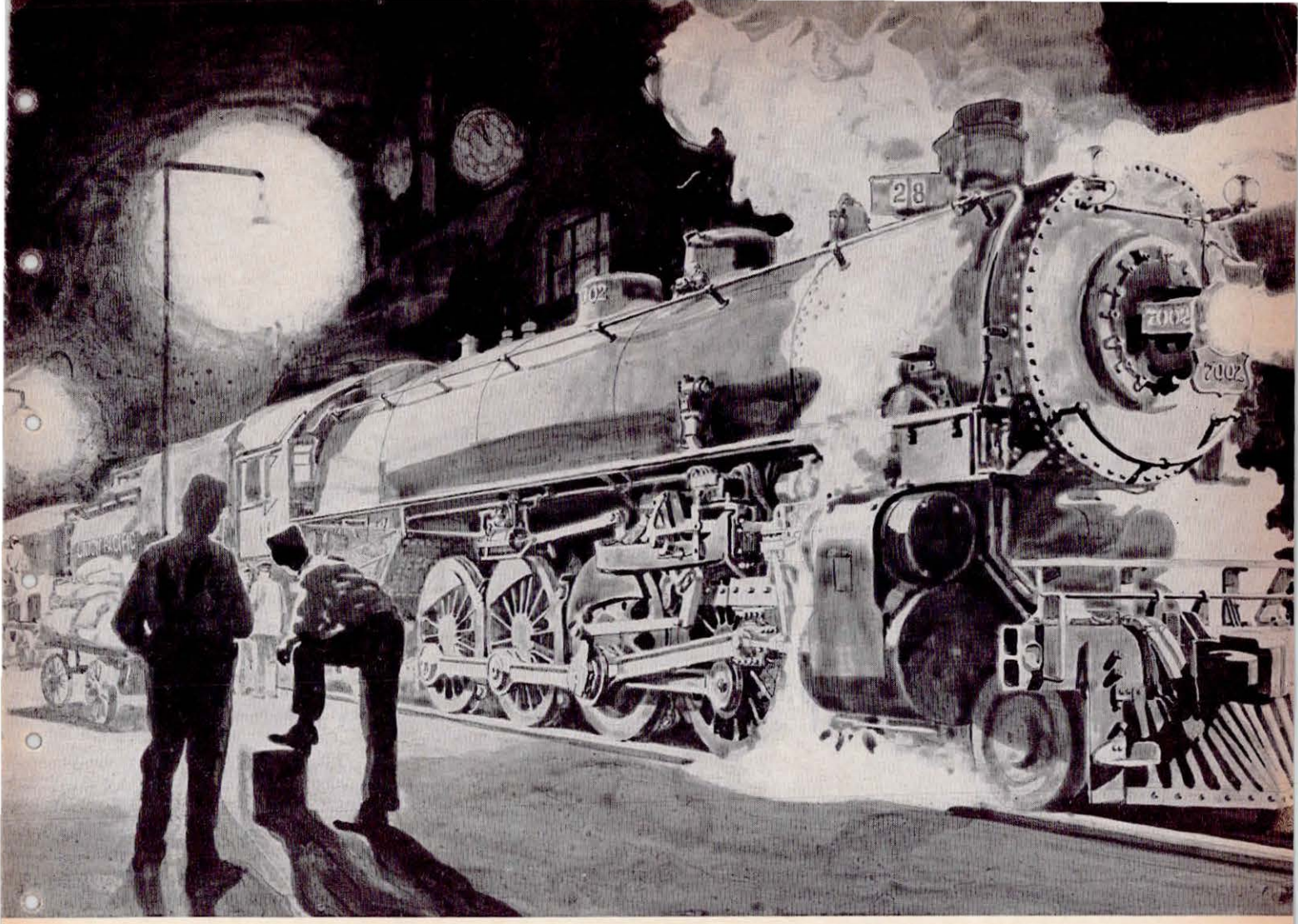
What Hartke wanted to find out is why ICC has never used a 1966 amendment to the Interstate Commerce Act to attack car shortages. Then ICC got the power to impose incentive per diem rates on railroads for the use of other railroads' equipment. The Committee thought that would be plenty of power. What Mrs. Brown replied was: (1) ICC decided in 1967 it didn't have enough evidence on which to base incentive rates; (2) a study designed to make up for that alck was finished only last week and will still need hearings; (3) to provide some relief, ICC has issued car service orders, as many as 54 since October 1968; (4) even with the 1966 amendment, the Commission can't go ahead and set per diem—basic or incentive—without hearings, and hearings plus judicial review of ICC orders slow the whole process.

SENATORS: YOU'VE HAD ENOUGH STUDY

It was too much for Hartke and Magnuson and the other Committee member present, Clifford P. Hansen (R.Wyo.). They declared: (1) their patience with bureaucracy has ended and the study-of-studies syndrome has gone too far; (2) the car service orders haven't helped very much; (3) ICC admission of the shortage existence cancels the need for further study; (4) Mrs. Brown and Ginnane have misinterpreted the 1966 amendment; (5) if ICC isn't satisfied that the amendment gives enough power, ICC can move under emergency provisions of the Act itself; (6) can ICC tell the Commission exactly what it thinks is still needed—by June 1?

ICC RECOMMENDATION IS PROMISED

Mrs. Brown said she would have an ICC statement for the Committee by June 1. Earlier, Hartke asked her if immediate legislation for a $4.50 per diem rate just for this year wouldn't "bring the cars home fast." Mrs. Brown answered that, personally, she's willing to try anything. That won't necessarily be in her recommendation. Whatever ICC comes up with, however, the Committee members made it clear they think ICC should worry about defending its orders after they're issued, not before.



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Union Pacific called her the Overland Limited because she was the crack train on the transcontinental route they completed with a golden spike in 1869. If you ever went her luxurious way, you never forgot.

In her handsomely appointed club car, sleepers and library-observation car, business and political leaders mingled with Hollywood stars.

She was the pride of three lines: Union Pacific, Chicago & Northwestern and Southern Pacific. And each hand-picked her stewards, cooks and waiters.

Here's how she looked at Cheyenne in the 30's, wheeled by a Mountain Class 4-8-2 with 73-inch drivers and 54,838 pounds of traction. The fastest train between San Francisco and Chicago.

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THE TRANSPORTATION WEEKLY
MAY 19, 1969

WEEK AT A GLANCE

PC stockholders approve holding company plan

Penn Central stockholders, at their May 13 annual meeting in Philadelphia, approved a plan of corporate reorganization. Under it, the Penn Central Co. will become a subsidiary of the Penn Central Holding Co. The railroad system will be known as the Penn Central Transportation Co.

Commenting on this development, Stuart T. Saunders, PC chairman, told the stockholders: "We are dedicated to development both as a diversified transportation system with a strong profitable railroad as its foundation and as a holding company with multiple sources of income and a variety of growth and income-producing investments." PC now owns or controls some 200 subsidiary companies.

PC President Alfred E. Perlman told the meeting that the directors so far this year have authorized expenditures of $37,400,000 for new and expanded freight classification yards over the entire system.

C&NW-Milwaukee: Merged by the middle of 1970?

Milwaukee Road President Curtis E. Crippen is hopeful that his company and the Chicago & North Western may make their proposed merger effective as early as July 1, 1970.

If the Interstate Commerce Commission accepts the case for oral argument before its August recess, Crippen says, "it is possible that the full Commission would render a decision by the end of the year. If the full Commission acts by the end of the year, or during the early part of 1970, it's conceivable that the effective date of the merger could be as early as July 1 of next year."

Harriman safety awards going to 19 railroads

Secretary of Transportation John A. Volpe will present E. H. Harriman Memorial Safety Awards to 19 railroads at Washington, D.C., ceremonies on May 22. Twelve railroads will receive awards for outstanding employee safety records in 1968, three will be recognized for their passenger safety records and four will get certificates of commendation for improvements in employee safety.

The selections were made by an awards committee headed by Harold F. Hammond, president of the Transportation Association of America.

The employee-safety competition is judged in three groups based on the number of man-hours worked during the year; a fourth category in this competition consists of switching and terminal companies. Winners in Group A are: Louisville & Nashville (first); Southern Pacific, including Northwestern Pacific, (second); Union Pacific (third); Chicago, Rock Island & Pacific (certificate of commendation). Group B winners are: Elgin, Joliet & Eastern (first); St. Louis Southwestern (second); Western Maryland (third); Canadian National U.S. lines (certificate of commendation). Group C winners: Bessemer & Lake Erie (first); Florida East Coast (second); Monongahela (third); Lake Superior & Ishpeming (certificate of commendation). Winners among switching and terminal companies are: Kentucky & Indiana Terminal (first); Union Railroad (second); Philadelphia, Bethlehem & New England (third); Belt of Chicago (certificate of commendation).

Winners in the passenger-safety group are: Richmond, Fredericksburg & Potomac (first); Chicago, Burlington & Quincy (second); Chicago & North Western (third).

The 1968 rate of employee casualties, consisting mostly of injuries, was 12.97 per million man-hours for Class I line-haul railroads and switching and terminal companies. That is the equivalent of a crew of five men working a 40-hour week for over seven and one-half years without an injury, according to the World Safety Research Institute. Passenger casualties last year were 8.58 per 100,000,000 passenger miles.

Tax-credit exemption for railroads?

There are growing indications that railroads (and possibly other segments of transportation) may win a full or partial exemption from repeal of the 7% investment tax credit. Barring that, equivalent relief, perhaps in the form of liberalized depreciation guidelines, might be granted to achieve the same effect. In either eventuality, railroad capital investment programs would continue their present momentum, rising to an expected near-record $1.8 billion in the current calendar year.

The Nixon Administration is known to feel that repeal of the credit would not substantially affect most U.S. business. But the effects on railroads, with low capital and long depreciation cycles, might be great, and Congressional and Administration leaders have been apprised of this. Industry observers last week were privately expressing the hope that the case for a full or partial exemption from repeal, or other relief, had not fallen on deaf ears.

Loss of the tax credit would have no immediate effect on railroad equipment programs. For example, the Union Pacific currently has on order $222 million worth of new equipment, and this will stay on the books whatever Congress does; this order, and others like it, will keep suppliers busy for many months.

But loss of the tax credit, UP Chairman Frank E. Barnett has made clear, might cause a retrenchment when new-order time comes around. Other chief executives have also made this point in Washington—apparently with some effect.

President Nixon announced his call for repeal of the credit in mid-April. At that time Northern Pacific President Lou Menk warned that "the car supply situation, now critical, will be severely aggravated and the shipping and consuming publics will suffer as a result of our inability to purchase freight cars if the investment credit is repealed."

GUS WELTY

LINES ON LABOR

RAIL MANAGEMENT has from now until Sept. 1 to plot its defenses against a new wave of union wage demands. Thanks to the Brotherhood of Railway and Airline Clerks, management already can see that wave taking form. It's a big one.

RAIL UNIONS don't usually put a price tag on their demands. They know as well as anyone that they're not dealing with a rich industry, and so the cost of the demands is soft-pedaled. But the Clerks, this time, aren't being shy. The package they're proposing includes "pay adjustments and benefits totaling over a half-billion dollars in the three-year period starting Jan. 1, 1970."

WHAT MAKES UP that package? First, BRAC wants three annual wage increases of 12% each. The union wants a cost-of-living adjustment and what it calls "longevity pay." It has a new guaranteed annual wage and employment stabilization proposal. It wants an expansion of the classification and evaluation fund established under the present agreement. It wants three additional paid holidays. It wants to expand vacation maximums to five weeks, and it wants vacation time paid for at 150% of basic rates. It wants a revision of existing insurance programs.

BRAC CLAIMS TO REPRESENT about 250,000 railroad employees, or approximately 40% of the total. And the arithmetic is pretty simple: If what BRAC is demanding were extended to cover everybody, that $500-million figure would balloon to $1.25 billion. For purposes of comparison, consider for a moment that the railroad industry's total net income last year was $593 million.

BRAC PRESIDENT Les Dennis is a practical man, not given to idle flights of fancy. So it's just a bit difficult to picture him in the context of these new demands—because granting them would be tantamount to confiscation of the industry by the organizations. Dennis must know that claims made under his name in a BRAC press release are wild and unsupportable. Railroads, for instance, are not enjoying "fantastic prosperity." Railroad profits are not at a "record high."

IN CONVERSATION, the Clerks' chief takes a somewhat milder tack. The demands, he observes, are bargaining proposals—and as such, they're subject to "slight modification." As for what will actually happen after Sept. 1, Dennis puts it this way: "We're looking forward to spirited bargaining sessions." File that under "Understatement."

JUPITER AND NO. 119, in faithful replica, were star attractions in re-enactment of historic "wedding of the rails."

DOT SECRETARY VOLPE swings at spike; AAR President Goodfellow looks on.

A great, golden day

Thousands made the pilgrimage to Promontory for the Golden Spike Centennial—and a glorious time was had by all.

PROMONTORY, UTAH
May 10

"Fantastique!" marveled Paris television director Claude Fayard as his camera and sound crew worked furiously to record the event for 50 million Frenchmen.

"This is going to be a famous day," solemnly predicted a little boy who sneaked into the press section as the flags waved and the crowds cheered.

"I wouldn't have missed it for anything," said Jack Guidera, manager of railroad market sales for Reynolds Metals Co. "I don't know why every railroader and every railroad supplier didn't come here today."

Twelve thousand people did come to this sun-drenched square mile of desert for the re-enactment of the historic "wedding of the rails"—the driving of the Golden Spike that linked the Union Pacific and the Central Pacific (now Southern Pacific) 100 years ago today.

There was railroad brass and government brass, and railfans aplenty—including the crewmen (some of them Wall Street brokers) and the hardy passengers who traveled six days from New York to Utah on the High Iron train, most of the way behind a 1946-vintage Nickel Plate Class S-2 Berkshire 2-8-4.

● **All this and John Wayne too.** Movie actor/rail buff John Wayne was in the stands, and so was the Mormon Tabernacle Choir, and both were in fine voice. The 21st Infantry Band, dressed in the gold-braided black uni-

VOLPE: "RAILROADS ARE JUST BEGINNING TO ROLL"

"I am afraid that too many Americans look upon our railroad industry as merely a piece of Americana—picturesque and nostalgic, but that's about all.

"I for one have learned that things are a little different now. Witness the two railroads represented here today—the Southern Pacific and the Union Pacific. Some 10 days ago I was privileged to be conducted on a 2-hour tour of Ben Biaggini's Southern Pacific operations in San Francisco, where the use of computers, video tape, microwave links and other sophisticated devices is resulting in genuine 21st century railroading . . . .

"Let me pay tribute, too, to the great Union Pacific Railroad—whose pioneering spirit continues with giant diesel locomotives such as the 6,600-hp Centennials, certainly marvels of our time.

"Just as the spike of 100 years ago made it clear to the world that we are a nation of builders, so today's spike makes it clear that the first 100 years were just a start.

"I personally view the railroad not as an anachronism, but as a growth industry. I am convinced that it will give birth to even more new ideas, and will transform itself steadily and progressively in response to new technology and new opportunity. So in honoring the pioneers of the past, we also acknowledge the promise of tomorrow. My friends, the railroads are just beginning to roll.

"Let me recount just a few of the advances that have been made in recent years:

"Piggyback service now accounts for a hard-won 4% of total carloadings and could very well double in the next six years.

"Seven years ago, the railroads carried less than 10% of new automobiles to market. Now, with double and triple deck cars, rails carry more than half of such automobiles.

"Five years after its appearance, the unit train carried one-third of all railborne coal. Containers, used in conjunction with the widely touted land bridge, will carry this line of advance still further.

"My Departmental experts now forecast that by 1975, a trillion ton-miles of freight will be transported by rail in this country—up 25% in nine years in spite of extremely vigorous competition. With system-wide innovation, consolidation, and integration, this figure could be even conservative.

"Even in the passenger business the outlook is more favorable than many people imagine.

"Our initial experience with high-speed demonstration trains—the Metroliner and the Turboliner—in the Northeast Corridor show that rails can be competitive with the other modes along runs of intermediate distance between urban centers of high population density. Soon, the auto-train may start carrying people *in* their automobiles from Washington to Florida . . . . In the near future new forms of guided transportation will emerge whose debt to the rails is clear—the tracked air cushion vehicle is one example. The gravitrain is another.

"The railroads can play a major part in the modernized and completely balanced transportation system that we must build if this country is not to be gripped in complete paralysis. The railroads also have an unparalleled and unrecognized potential as instruments of long-range environmental planning. They can help us to relieve congestion, reduce pollution, and exercise a more responsible stewardship for our dwinling natural resources. Railroads can help to restore the good life for millions of our citizens."

—DOT Secretary John A. Volpe, at Promontory, Utah, May 10.

is relived in Utah

forms of Civil War days, played patriotic tunes; and 20 bearded members of the Golden Spike Association of Box Elder County, faithfully recreated the stirring events of May 10, 1869, while the onlookers drank Sprite (Utah is a drier place today than it was 100 years ago) and yelled encouragement.

An old-time, Fourth-of-July excitement was in the air. The oratory was upbeat: This was a day for pointing with pride, not viewing with alarm. "My friends, the railroads are just beginning to roll!" declared Transportation Secretary John A. Volpe, whose speech (see box), to the satisfaction of railroaders present, was attuned more to future than to past glories.

"Just because we're old doesn't mean we're through," affirmed Thomas M. Goodfellow, president of the Association of American Railroads and chairman of the Presidentially-appointed Golden Spike Centennial Celebration Commission. A jet streaked overhead as Goodfellow predicted: "In the future there'll be no railroads, truck lines or airlines as we know them today. All modes of transport will be fully integrated into a transportation system."

● **The engines meet.** The real stars of the day were replicas of the two famous locomotives that met at Promontory a century ago—Central Pacific's "Jupiter" and Union Pacific's "No. 119." Blue-blazered members of the High Iron train crew—led by High Iron President Ross E. Rowland, Jr., a broker in commodites futures—shoved the powerless engines together after the Golden Spike had been driven and the word had been flashed to President Nixon in Florida, by telegraph key, just as it was flashed to President Ulysses S. Grant in 1869: "Sir, we have the honor to report the last rail laid and the last spike driven. The Pacific Railroad is finished."

Dramatizing the great technological strides made by railroads in 100 years, a Sylvania (KarTrak) automatic car identification label was affixed to the side of the "Jupiter." Under original plans, KarTrak was to have activated the telegraph key by electronic impulse. But a last-minute power failure (unrelated to the KarTrak system itself) made this impossible.

After the re-enactment pageant, Secretary Volpe, SP President Benjamin Biaggini and UP President Edd Bailey took turns driving and re-driving the spike for the benefit of photographers.

During the course of the colorful ceremonies, Promontory was officially designated a National Historic Site and a new $420,000 visitors' center was opened. There is now no town at Promontory; there is no railroad. The main line was re-routed when the Lucin Cutoff across the Great Salt Lake was completed in 1904. The tracks at Promontory were torn up in World War II, and nearly a mile of track had to be laid for today's ceremony.

● **By train, bus and 'copter.** Promontory is about 90 miles from Salt Lake City. For Centennial visitors, the nearest rail point was Ogden, about 53 miles away. Five special trains came

LUTHER MILLER

AS THE EDITOR SEES IT

EYE-OPENER AT NORTH PLATTE—A few days ago, during the Golden Spike festivities in Utah, the Union Pacific scooped up a handful of Eastern reporters and flew them back East a ways—as far as North Platte, Nebraska. There, these fourth estaters got a look at something the citified press, especially the citified Eastern press, seldom sees: a modern railroad freight yard, humming away in the prairie, far from the commuter-train headaches of the Atlantic seaboard.

"NEW YORKERS NEVER SEE THIS"—North Platte is the home of UP's new $12-million, automatic Edd Bailey yard. Through this yard, explained Superintendent J. E. Guinan, pass 4,000 freight cars a day. Geared for the future (as everything at UP seems to be), the yard has a capacity of 10,000 cars. One New York reporter in the group stood in the control tower, watched eastbound cars being classified by pushbutton into eastbound trains, and commented: "You know, this is something New Yorkers never see. They have their daily battle with commuter trains, and that's what they know about railroads; they have the vague impression that all of their freight arrives by truck, because that's all they ever see." What a pity that reporter's name wasn't C. Z. Sulzberger.

WHO'S STULTIFIED?—C. Z. Sulzberger is a globe-trotting editorial-page columnist for the New York Times. He chose Golden Spike time to write, from Japan, "While American railroads declined into stultification, new high-speed Japanese expresses raced along at 120 miles an hour." To stultify, says Webster's, is "to make or cause to appear stupid or foolish." If anybody's stultified, we suggest, it's Mr. Sulzberger.

NO NORTH PLATTES IN JAPAN—The Times columnist apparently finds U.S. railroads "stultified" because they haven't built a New Tokaido Line. He didn't bother to find out that this great new line cost $1.3 billion, and is successful because it exists in a country where there is one automobile to every 35 persons; not one to every 2.5 as in the U.S. It is not demeaning the real accomplishment of Japan's NTL to suggest that the Japanese would give their eye teeth for something as modern and efficient as the Edd Bailey yard at North Platte. Japan's freight yards have not caught up with the 20th century—which may be one reason Japanese railways are losing $250 million a year. Does Mr. Sulzberger know this? Does he care? Would he like to visit North Platte? UP Public Relations Director Ed Shafer, who set up the Golden Spike trip, would probably arrange it.

into Ogden for the event. From there, VIPs and press were bussed or 'coptered to Promontory.

At Ogden, both SP and UP had their newest, shiniest rolling stock on display—and at the Ogden station, two modern diesels of the two railroads stood nose to nose in a latter-day re-enactment of the meeting of the rails. Mayor Bart Wolthius presented keys to the city to Biaggini, Bailey and Goodfellow. The 80-bus caravan rolled on to Brigham City for similar ceremonies. The next-to-last stop on the "Pilgrimage to Promontory" was at a point where 10 miles of track was laid by Chinese laborers on April 28, 1869, a record never surpassed. Here a plaque was dedicated.

● **A week to remember.** In Salt Lake City, there was a week-long series of events leading up to the climactic ceremony. These included the Golden Spike Railroad Symposium at the University of Utah; the Golden Spike Centennial Dance, hosted by the Brotherhood of Locomotive Engineers; and the world-premiere of "True Grit," whose star, John Wayne, rode into Salt Lake City on the High Iron train and stayed for the rest of the week's events. At Ogden, there was the Golden Spike Empire Youth Symphony and Drama Festival. For the day-after-Promontory, Centennial guests were invited to the Mormon Tabernacle for the Tabernacle Choir's regular Sunday morning broadcast, to be followed by a special Centennial concert.

Celebrations in Sacramento, Calif., western terminus of the old Central Pacific, also preceded the Promontory ceremonies. These began April 25 with ground-breaking for reconstruction of the Big Four Building, first headquarters of Central (now Southern) Pacific. Anaheim, Livermore and San Francisco also had Centennial-related celebrations.

● **High Iron success story.** Excitement in Salt Lake City peaked with the arrival Thursday night of the High Iron train, whose spectacular progress from East to West made the Golden Spike Centennial front-page news all week.

Hauled by steam as far as Kansas City, where the UP's new 6,600-hp Centennial diesel took over, the High Iron train was cheered by hundreds of thousands as it made its way west. Included in the 13-car consist were three exhibit cars displaying the latest in railroad technology. Exhibitors included the Department of Transportation, the Penn Central Railroad, Oakite, Huck, Ticket Reservaton Systems, Inc., Sylvania, Electro-Motive, General Electric, Brenco, Racine Hydraulics, Reynolds Aluminum, Berwick Forge and the

(Continued on page 40)

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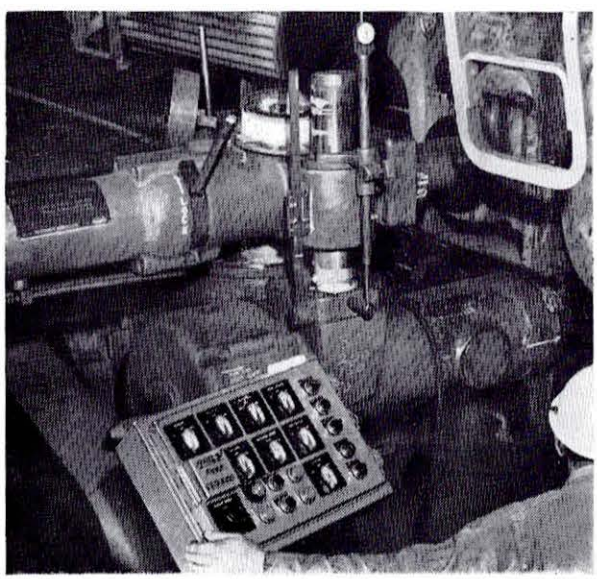

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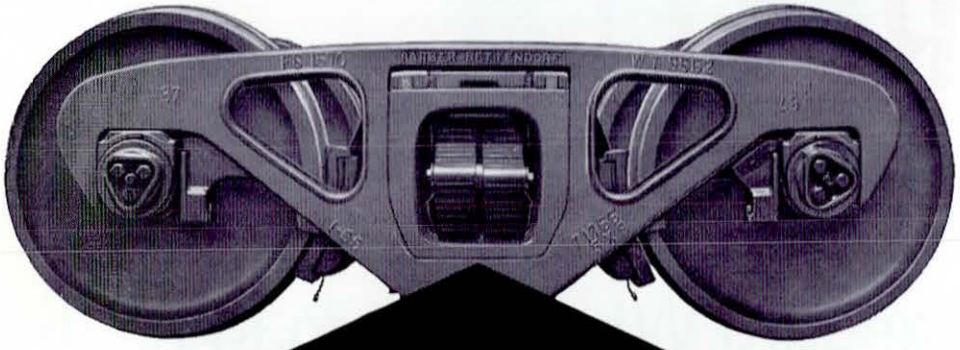

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RAILWAY AGE
THE TRANSPORTATION WEEKLY

TOMORROW'S RAILROADS

NO. 5
OPERATIONS AND QUALITY

Continuing a 12-part exploration of what can and must be done to create the 21st century railroad . . . the 21st century transportation system

BY GUS WELTY

● **This generation** of railroad men is in a unique position. It can turn the industry around . . . it can build a strong national railroad system . . . it can lay the groundwork for a strong national transportation system. Or, it can abandon hope . . . let the agonizing slide continue . . . lay the groundwork for nationalization of the only form of transportation suited to serve as the base for a true intermodal or multimodal distribution system.

The choice is not entirely the industry's to make. But a wide range of options is open to railroad men. And it will be the skill of railroad men in deciding between and among these options that determines whether railroads come back or fall back.

● **Service is the key**—high-quality, dependable, reliable service, intelligently priced and vigorously policed. Transportation companies can make money with this kind of service, because shippers will pay for it. Shippers will even pay a premium for it, and they prove it every time they quit the railroads and switch to truck or air service.

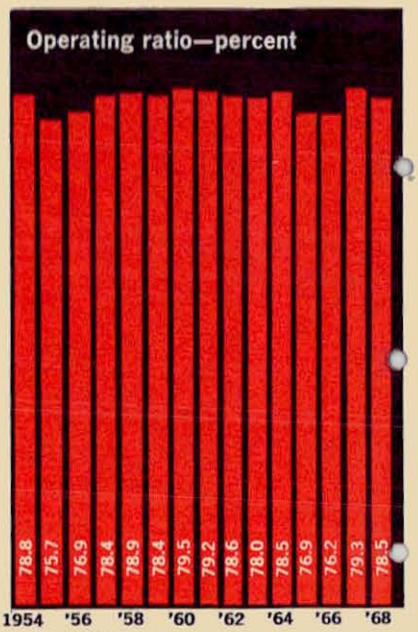
Railroad service today does not enjoy a reputation for quality, dependability or reliability. Railroad men themselves complain that pricing, too often, is unimaginative and based more on tradition than fact. Again too often, the policing of service is haphazard—the negative reaction to complaint rather than the positive development of programs that force movement.

Here, there is a curious fact to consider: Those roads that have established quality-control programs . . . placed

emphasis on reliability all along the line . . . set performance standards and then lived by them—those roads have found that business improves. And the experience has been a profitable one, even though they may be spending more dollars to move freight.

Service itself is an amalgam. It is an adequate car supply, an adequate power supply. It is manpower, and a track structure that will withstand today's loads and speeds. It is brainpower and computer-power and information systems. It is—perhaps above all else—communication, or the ability to know and understand what the customer needs, why he needs it and how it can be provided on a basis of mutual benefit.

Despite economies, cost

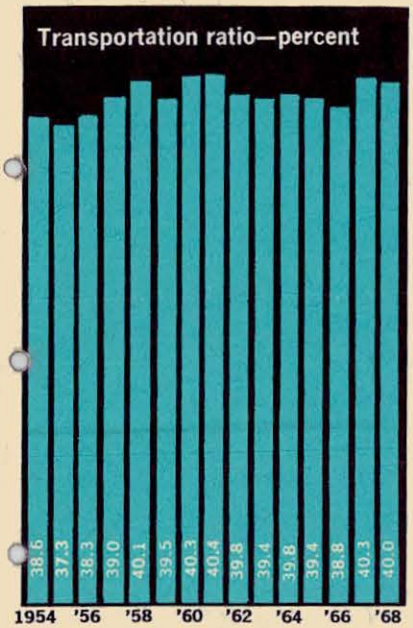


Source: AAR

● **This kind of understanding** may or may not be as sharp as it should be. One major shipper—spending more than $30 million a year with railroads—puts it this way: "Railroad management obviously recognizes that railroads compete with other railroads. Railroad management also recognizes that railroads also compete with other forms of transportation. But how many people in railroad management recognize that transportation competes with the inventories of physical things that might or might not be transported? How much of railroad management recognizes competition between transportation and warehouses, between transportation and production facilities?"

It's this shipper's suggestion that rail management is not really aware of competition other than that provided by another railroad or another form of transportation—"and as such, management is neither efficient nor imaginative."

ratios are inching up



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● **Rightly or wrongly,** shippers also question railroad views of technology. Their point: Technological progress has been largely cost-oriented, not service-oriented. Railroad men would argue the point—but the industry's labor problems, its development as a capital-intensive rather than a labor-intensive business, have lent strength to this shipper view.

If railroads are going to start growing with the country, service changes will have to be made. They won't come easy. But the demand is there.

Shippers have an increasing number of options available. The Interstate Highway System gives motor carriers a capability undreamed of just a few years ago. Jumbo jets will make air-freight operations far more competitive than ever before. Barge competition can't be overlooked, as the inland waterways system is expanded. Railroad traffic is threatened at the top, at the bottom and in the middle. Top railroad men—especially those who will be around for a while—know that service improvement has to be the No. 1 target, for prosperity or even for survival.

● **The competition,** not really being modest about its success, confirms the fact: "The customer is the kingpin," says one motor carrier's president. "Railroad people just don't understand or won't understand that truckers charge higher rates, much higher rates in many cases—and that every bit of freight we get is because of our service. We don't get freight because we have low rates."

In contrast, a railroad chief executive takes this view of his industry: Individual railroads have "proved incapable of harmoniously working together in the per-

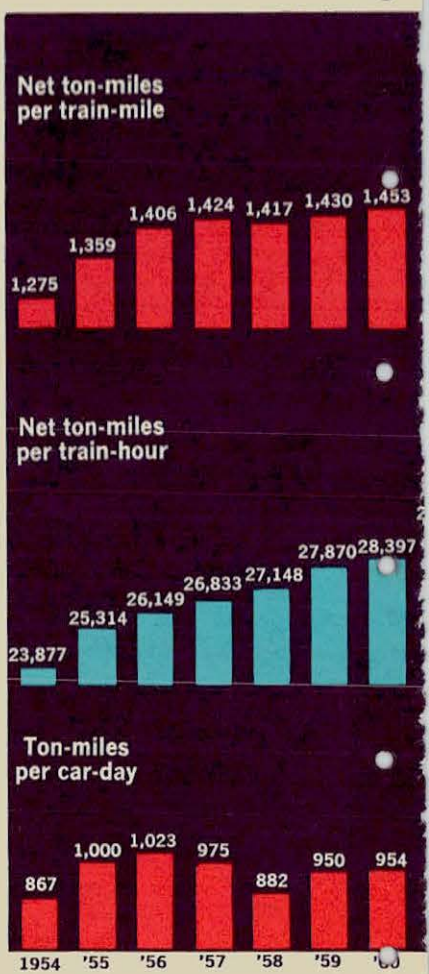
formance of many functions inherent in an integrated national transportation system. Not only has joint service often been more costly and slow, but the individual railroads—in constantly fighting each other over the terms for conducting it—have also been hurting themselves and destroying the integrity of the national system itself."

● **What's needed,** for railroad service improvement? Observers can cite a long list of requirements, most of them well-known if not widely-adopted. Merger of railroads, for instance, is regarded as a service-improvement measure (though some shippers, with recent sad experience, would question this). At the same time, there are a number of less-accepted service principles which may deserve a serious look.

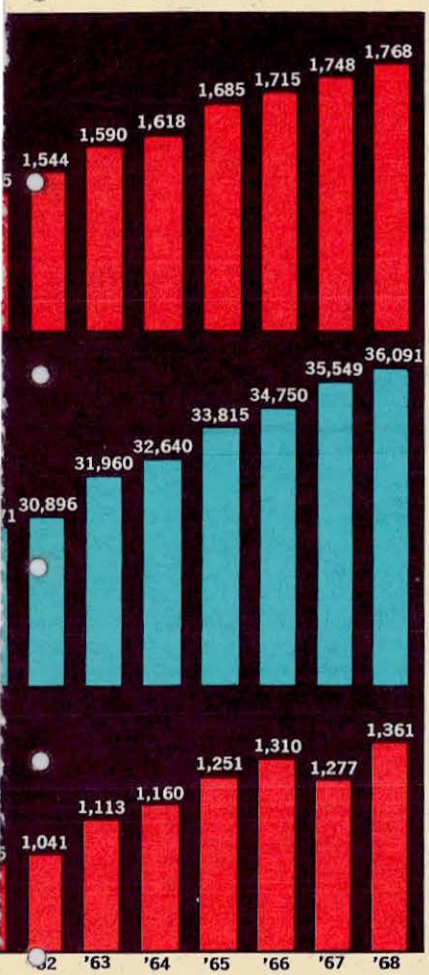
One is that quality-control programs should be made less a scoreboard operation and more a goal-setting proposition. It's logical that control programs should *start* with measurements of present performance and the setting of standards based on those measurements. But if the customer is unimpressed with present performance, he's not likely to put his faith—or his dollars—behind any "quality control" program that does not involve a continuing upgrading of both the standards and the performance. Put bluntly, quality control will work best to increase railroad profitability when it's oriented toward service *improvement* and control.

● **Another principle** is that railroads must get closer to the customer. Assignment of market-managers is a first step, but there are others that can be taken. On tomor-

By efficiency standards, railr



ds show steady improvement



Source: AAR

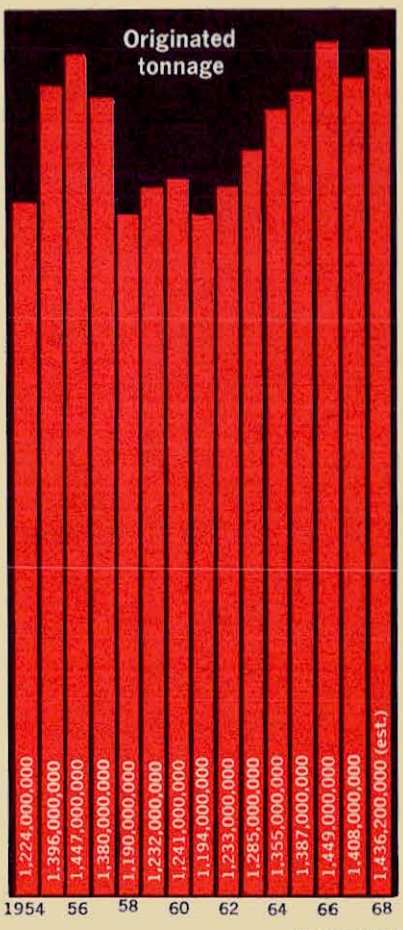
row's railroad, for example, there may be a great many management people whose work experience includes both operating and sales/marketing assignments. There may also be a kind of "student exchange" program, through which the carrier and the customer trade personnel, so that the buyer of transportation learns more about the seller's problems and operations, and vice versa.

● **Rail management** doesn't lack options, in areas such as these. It is in more of a bind, however, in restructuring operations in the way some observers think it must, in tomorrow's transport market.

These observers see too much of the past, in operating theories and practices. They see a kind of operation that worked well in a monopoly era—maximum tonnage trains, elaborate terminals, volume orientation. But, as one observer puts it, "in a competitive market, this approach can start to kill you. More and more unpredictability for individual units is created. The failure-rate for both equipment and people is maximized. The result is that more and more traffic is diverted to more reliable means of transportation."

● **Marketing men**—those who live today and see tomorrow—argue that railroads have given up a lot of business that could be regained. Despite the competition of motor and air carriers, they want to re-think the long-haul market. Despite the competition of motor carriers, they want to re-think the short-haul market—from zero-mileage on up. These marketing people think railroads can more than hold their own—if certain new conditions can be created.

Rail tonnage has improved only slightly...



Source: AAR

Help will be needed—help from the brotherhoods and help (or at least tolerance) from government.

● **As one railroad chief executive** points out, all trains are not created equal. There are minitrains and maxi-trains—and manning requirements are not the same. Organized labor's acceptance of this fact—that some proposed train operations could be handled safely and efficiently by two crewmen or perhaps even by one man—would go a long way toward bringing competition back to certain segments of the market. Labor's long-run gain, of course, could be a net increase in jobs as business is rebuilt. There would be risk involved, but it could be made minimal. And labor's leaders themselves are coming to realize that the future cannot be supported by the past.

● **Government will have** a different role—actually a more passive than active one. If railroads can improve service quality, if railroads can strengthen their long-haul capability and develop new short-haul capability, competitors can be expected to react in several ways. One, almost certainly, will involve a campaign before the regulatory agencies—with railroads forced to defend themselves against charges of discrimination, unfair competition, destructive competition. Under the circumstances, government—if it is really interested in fostering sound, efficient and economical transportation—must remain as flexible as the law allows. At the same time, the law itself deserves constant scrutiny—and whatever changes are needed to bring it in line with current conditions.

● **When everything is considered,** one of the least of the railroads' problems in service improvement is the technological problem. Technology that produces cost efficiency can also produce service efficiency. The computer, for example, can crank out reports that would take an army of clerks weeks or months to produce. But the computer can also be used as a diagnostic tool to pinpoint service problems and—with proper programming—to consider all fixed and variable factors and tell management what service-improvement proposals will and won't work.

Technology of a different sort can be applied to reducing service failures and improving reliability in actual operations. More efficient methods of in-track rail welding are on the way, and they should permit substantial upgrading of both mainline and secondary routes. Also on the way is a kind of diagnostic center for equipment—a one-spot, in-motion checkpoint which will flag all manner of defects, existing and potential. Both of these innovations hold opportunity for cost reduction. Both also hold opportunity for significant service improvement.

● **In the end,** however, technology—like the brotherhoods and government—can only help to solve the service problem. The initiative belongs to the railroad industry—as individual companies and as an industry.

The motor-carrier industry and the airline industry are segmented, just as railroads are. But there *are* coast-to-coast truck lines and there *are* coast-to-coast airlines—and their existence can serve to point up the competitive need for inter-railroad cooperation. Yet, one industry observer contends, "too frequently in railroading, the

. . . and the industry's share of the freight dollar gets smaller

Sources: TAA, AAR

Net income suffers... so does rate of return

*On investment after depreciation
Source: AAR

commitment to serve does not extend throughout. Too often, the positive efforts of one road are negated by a less-than-attentive road in the routing. Railroads haven't really grasped the importance and significance of the inter-dependence of railroads as an industry."

- **A shipper puts the problem** in slightly different terms: "If railroads are really charged-up about filling a role in the shipper's distribution pipeline, for their own benefit they must provide consistency of service day in and day out. A railroad has to gain an image of being a one-car railroad—simply because competitive modes continue to capture and retain business on account of reliability of single-shipment service."

- **Is it possible** for an industry with 1.8 million units of equipment to view each one individually? Is it possible for an industry made up of more than six dozen major companies to work as an industry? Is it possible for each one of those major companies to get everyone in the organization working toward common goals?

- **All three questions** could get positive, affirmative answers. All three questions have to get positive, affirmative answers if the industry is to provide the kind of service that will confirm its position as the keystone of tomorrow's total transportation network.

It may sound like something made up by an overly-optimistic public-relations man—but it is a fact: Where railroad response to new ideas used to be "We can't," railroad response today, increasingly, is "We can"—or at least "We'll try."

Coming June 23
Part 6:

MANAGEMENT AND THE ABILITY TO MANAGE

Network models pay off

CN uses simulation model to minimize the road's capital investment in meeting its service requirements.

Powerful computing techniques make it possible to simulate real-life operations of businesses as varied as manufacturing, retailing, and transportation. The payoff is that computer simulation not only enables one to measure and determine effects of changes, but also provides for improved control and operation of the business.

● **One-year payoff.** Canadian National is now operating a computer simulation of its Atlantic region. Some 48 man-months were involved in developing the mathematical model, program preparation and debugging. CN officers estimate that the simulation will pay for itself in one year of operation.

CN's network model is a transportation planning tool which is used "to improve our ability to predict the effects of change in the CN market, service targets, operating plans and physical resources," said E. Murray Hallonquist, system transportation planning officer, at a Transportation Network Analysis seminar sponsored by the Railway Systems & Management Association.

Specifically, CN wants to minimize capital investment in meeting service requirements. Also, management wants assurance that it is making proper use of capital investments.

● **Typical problems handled.** The types of problems to which the network model can be directed are basic, said Hallonquist. For example:

—At any given level and pattern of traffic and of service targets, what are the implications of alternative train schedules and marshalling arrangements?

—Does the specific pattern of schedules and marshalling arrangements applicable to a given level of traffic necessarily apply to either a higher or lower volume of business if service targets are to be maintained?

—At any given "mix" of traffic as between "preference" and "bulk" movements, should a road operate longer trains, shorter trains or some of each? What is the impact of these alternatives on achievement of service targets and productivity goals?

—What are the probable effects on other movements of entirely new patterns of service and schedules in the fields of passenger, express, container or unit trains in which service guarantees may be part of the transportation specifications?

—Can marginal additions of capital in physical plant improvements keep pace with a gradually increasing level of traffic, or must the railroad face up to major changes in main track and secondary plant?

"We have tried to make the network model sensitive to the traffic or market elements of the transportation equation," Hallonquest said. "We have provided for a variety of separate traffic classes which can include head-end cars, manifest freight, bulk traffic and a variety of other cars including empties, which themselves can be divided into two or more types that reflect the degree of preferential handling they require. The traffic that moves through the model is handled in the form of cuts.

Measuring the alternatives

"We use service targets by means of which we can measure the performance of alternatives in terms of either existing or alternative targets for delivery. The achievement of these targets is measured relative to cumulative transit time, and, of more significance, to 'clock' time. In other words, if for sales reasons delivery prior to 8 a.m. on a given day is the target, the model measures performance relative to that target time."

● **Output reports are vital.** The key output of the network model is the transit time or performance of selected traffic. During application of the model, the comparison of transit time vs. targets for various alternatives will be useful for evaluating effects of the proposed policies on customer service.

Also available to the user are reports which provide a basis for analyzing selected yards, terminals, junctions, main and secondary lines and trains. Yard snapshot reports can be produced at any location and at any frequency which record the current status of the yard. These can be used to detect gradually developing congestion.

Yard workload reports may be studied to evaluate their resource utilization.

Line volume reports show the volume of traffic which ran over each selected line, as well as delays incurred by trains on the lines.

Train performance reports, which follow every step in the movement of selected trains, provide the user with essential information for analyzing performance of freight trains under expected conditions.

● **Problems and solutions.** CN had problems with its network simulation, but solutions were found. Hallonquist offered suggestions that might be helpful to others working on network simulation programs:

"There are undeniable physical problems such as that of the definition of the network itself, of physical practicality, and of time allowances which must be established. Secondly, there are problems of data input. These are concerned with the adequacy of coverage of the basic data system from which car records emerge for use in the model. There are problems of data creation in situations where the overall system does not provide the coverage desired. We must face up to the problem of reliability of the data. Thirdly, there are inevitable problems of human understanding, commitment and credibility.

"We can offer certain suggestions in meeting these problems. First, I can recommend a high degree of care in clarification of objectives and in establishing output requirements. Both areas need clear statements so that the teams engaged in the development of a model know what they are striving for. Second, I would suggest that you insure that base data are in fact available. If not, insure that it can be created within reasonable limits of time and manpower requirement. Third, secure the involvement of all relevant departments, [particularly] those line personnel with whom the team will be working. Better still, see to it that line personnel are in fact on the team."

Plans are developing for expanding the size of the model to cover the entire CN system across Canada. CN officers point out that network modeling is a transportation planning tool that can effectively be used in five major areas:

—Market planning, demands for service.

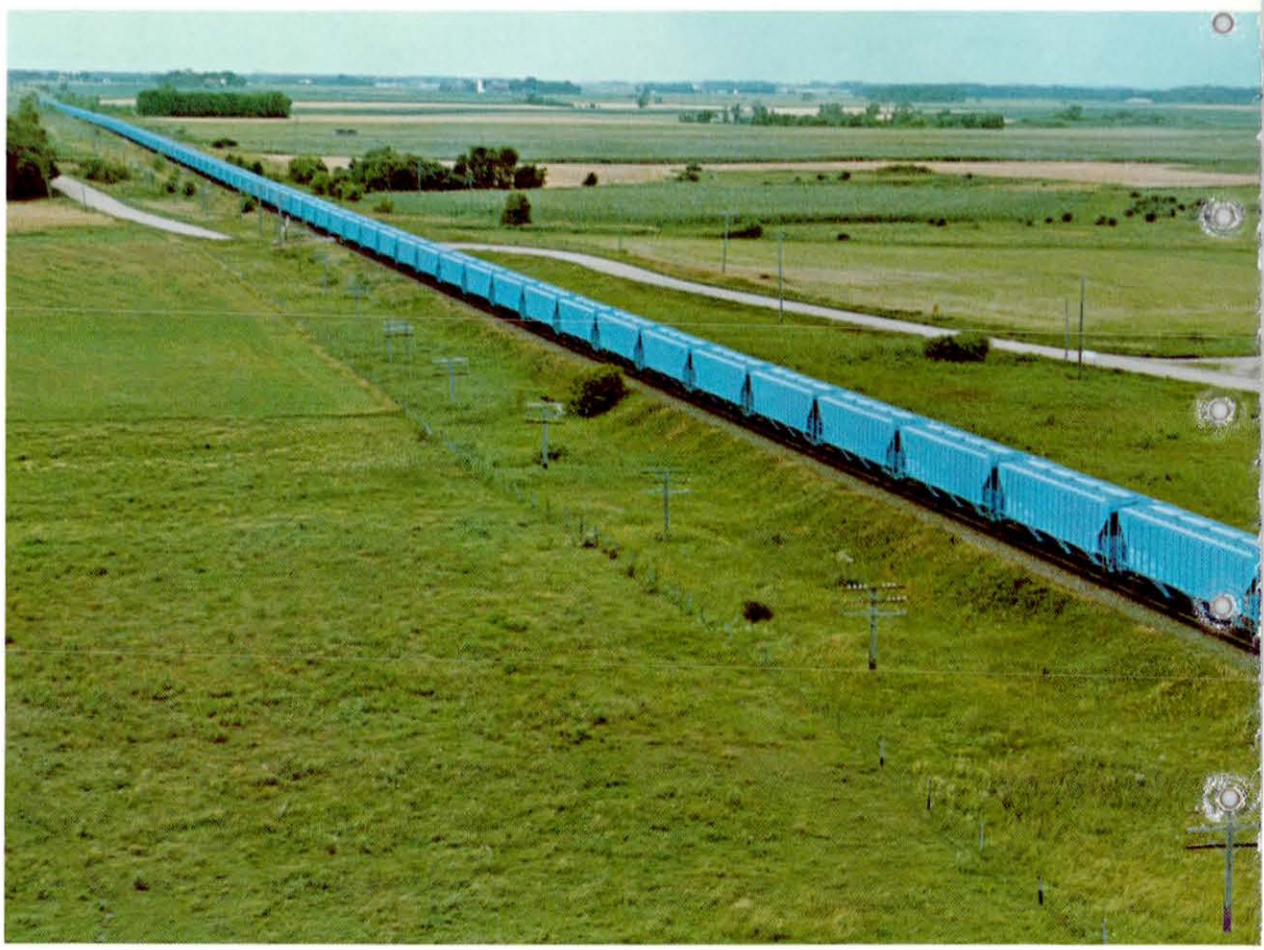
—Relating demands to capability.

—Establishing resource needs.

—Developing trade-off criteria.

—Managing on-going operations.

Most U.S. railroads will be using a network model for strategic planning by 1975, predicted RSMA conference chairman Dr. William P. Allman, assistant vice president, Chicago & North Western ■



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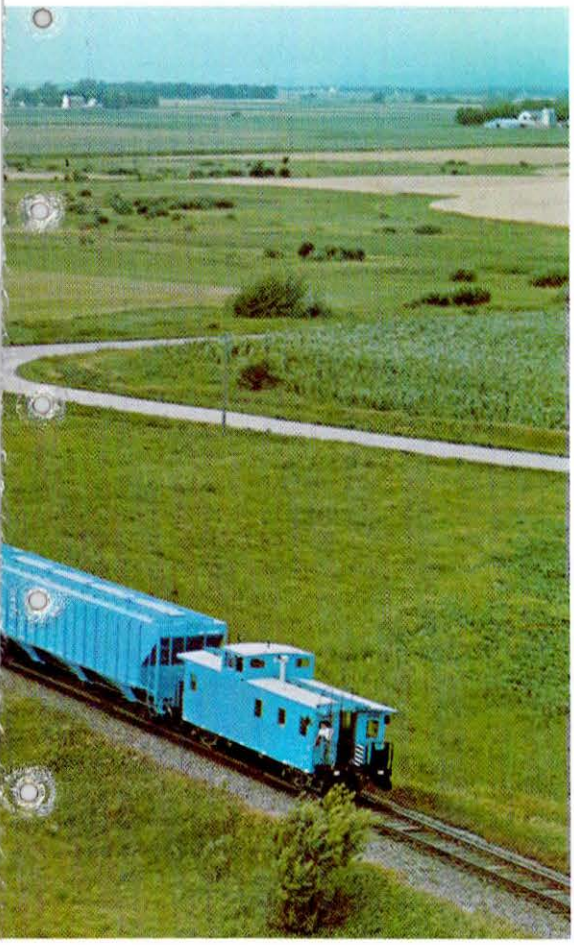

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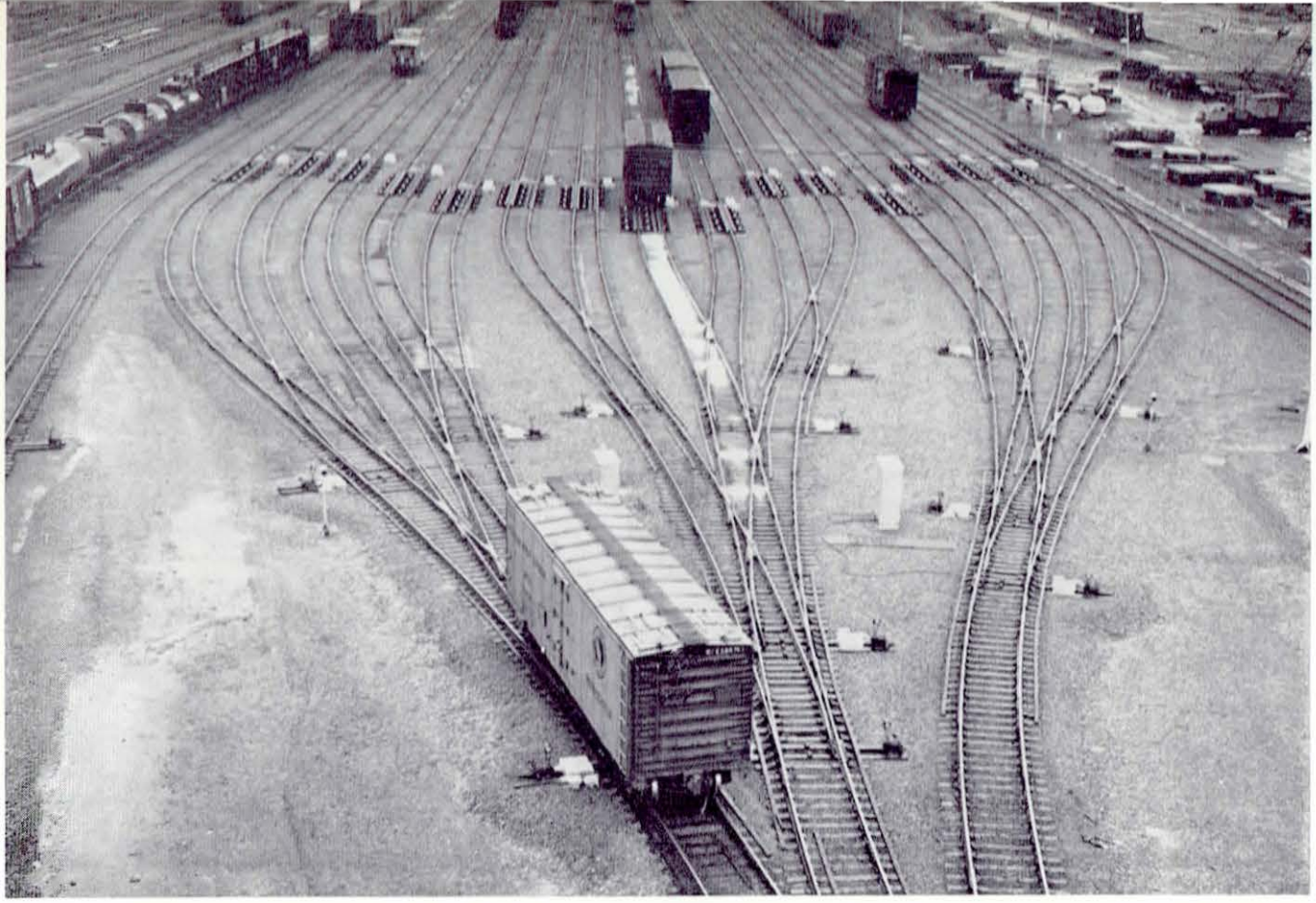
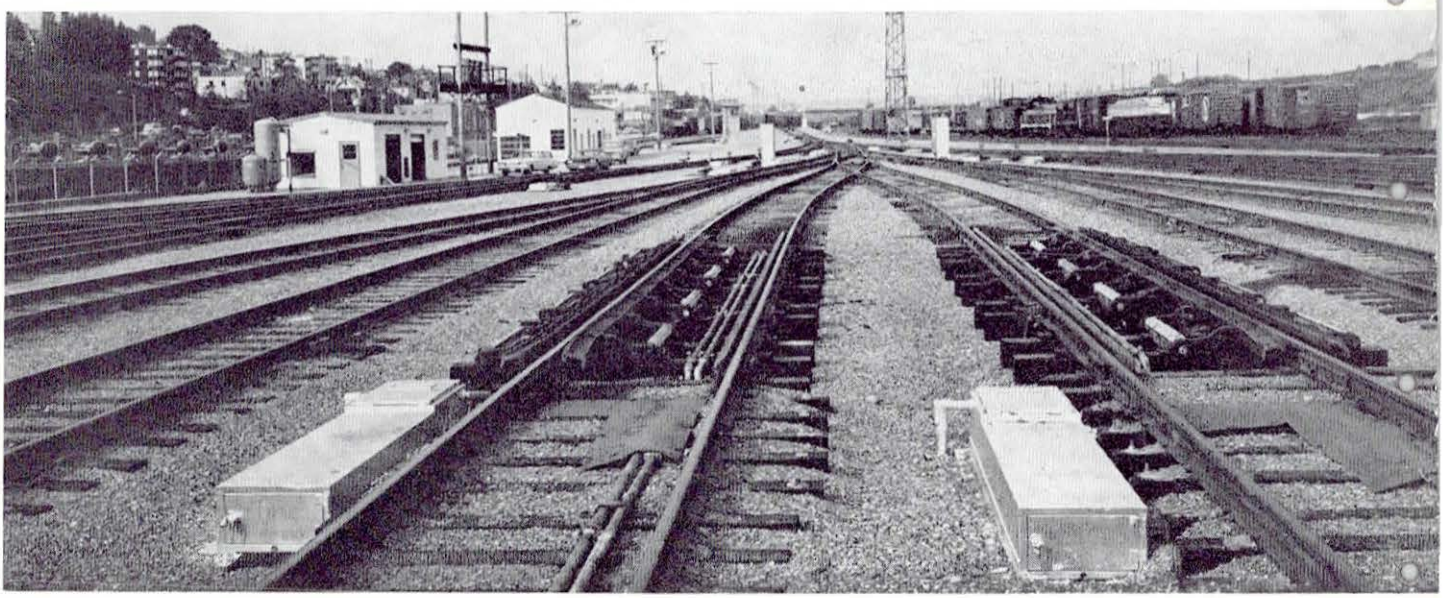


TRACK RETARDERS beyond clearance feature Balmer yard. Track capacities, based on 50-ft car length, vary from 24 to 32 cars.

Upgraded yard returns 20%

Car handling at GN's Balmer Yard takes about one-half the time needed under the old setup.



WEIGHT-COMPENSATING RETARDERS on two Balmer yard tracks are shown in this view east. Control tower is at crest of hump.

CARS ARE ROUTED by pushbutton at Balmer yard. As many as four routes can be stored in the electronic control system.

"Upgrade your plant, improve your product," the old saying goes—to which might be added "and get your money back."

At Seattle, Wash., Great Northern has poured $2.5 million into a modernization of Balmer Yard, converting the facility from flat switching to semi-automatic pushbutton retarder operation. Traffic flow and shipper service have been improved. And GN is realizing a 20% return on its investment.

● **Speedup in service.** With the new operation, the volume of traffic can be handled with fewer switch crews and with smaller-size crews. Cars can be handled through the yard in about half the time required under the old, flat-switching setup. And installation of a new weigh-in-motion scale reduces weighing to a two-second proposition built into the classification operation. In the old yard, each car to be weighed had to be positioned on a scale and the job took about five minutes per car.

With a 21% increase in the number of cars handled through the yard in the 1962-1967 period, GN used the tried and true methods of increasing the capability of its old flat yard. Minor track changes were made. The number of switch crews was increased. But the road really didn't have as efficient an operation as it would have liked. Taking a hard look at the problem, GN officers realized that a major upgrading was needed, not only to handle existing traffic, but also to have some cushion for traffic growth in the future.

● **Pushbutton yard is answer.** To obtain better throughput and greater control of cars in classifying—particularly coupling speed impacts—GN chose to build a semi-automatic, retarder classification yard. Using Abex Corp. equipment, the new yard features automatic routing of cars requiring only that the hump conductor press a button for the track to which cars are to be classified. Speed of rolling cars through a master retarder and a retarder on each of the 16 class tracks is controlled by a combination of speed-sensing devices and electronic circuitry.

In a slightly different configuration of retarder usage, Balmer Yard has a 19-foot master retarder on the downside of the hump below the electronic scale, and a 39-foot retarder on each of the class tracks beyond the clearance point. GN and Abex engineers considered a more conventional design which would have used group retarders, each serving possibly four class tracks. However, the master and individual class track retarders were chosen for a number of reasons:

—Grading costs could be minimized because a lower hump would be needed than with group retarders.

—A retarder on each class track would provide greater control of coupling speed to the desired 5 mph or less.

—Less retarder maintenance would be required because a fewer number of cars would be going through any one retarder.

● **Other improvements.** GN did more than just construct a new retarder yard. To further improve yard efficiency, a new two-story 40-by-100-foot yard office building was constructed. A new three-track car repair building, 110 feet by 250 feet, is now under construction. "These facilities, as well as an improved car cleanout area and caboose servicing facility, will aid in reducing costs for GN and in providing better service for its customers," says C. F. Intlekofer, assistant chief engineer, Lines West.

To be sure that everything is running smoothly at the new yard, electronic data-processing equipment in the yard office provides the necessary paperwork automation for efficient handling of approximately 55,000 cars monthly. Balmer Yard is also tied in with GN's terminal performance control system, with yard performance analyzed at St. Paul on GN's Univac III computer. Results are returned promptly to the yard for further action. (RA, June 17, 1968, p. 18).

● **Car speeds controlled.** At Balmer, the speed of cars moving through

FRANK MALONE

WATCHING WASHINGTON

DO YOU like statistics? Consider those thrown around during National Transportation Week, which was observed May 11-17. The Transportation Association of America led off with an estimate for the nation's 1968 freight bill of $73.5 billion. That's 4.5% higher than the $70.3 billion of 1967. Add passenger costs, and you get a transport bill equal to 20% of the U.S. gross national product. The GNP rose 5% in 1968. Half the transport money went to regulated commercial carriers, TAA said.

TRUCKERS came in with a report on their 1968 trends, which were good. Last year, truck revenue increased 12% to $12.4 billion, American Trucking Associations said. "For the sixth consecutive year, the revenues of federally-regulated for-hire motor carriers alone exceeded the freight revenues of the nation's railroads," ATA added.

THE ASSOCIATION of American Railroads released the 1969 edition of its yearbook of facts, which weren't so good. True, operating revenues rose to a new high of $10.9 billion. There was a 4.7% rise in revenue, as good as the GNP growth but considerably less than the truck figure. Rate of return was 2.4%, compared with about 4.5% for trucks.

BUT THEN the Transportation Department's statement seemed to brighten the picture for railroads. "Everywhere we look," Secretary John A. Volpe said, "there will be great increases in volume." He predicted the total transport bill would grow by 100% in the next decade. Trucks will haul 600 billion ton-miles by 1975. Rails will haul one trillion, Volpe said.

ONE THING nobody did was tie all all those statistics together to get some kind of perspective. Do that, and you find that trucks needed 415 billion ton-miles—just over half the rail total—to gain more revenue than trains. That means a 23% share of inter-city ton-mileage, compared with 42% for rails. Next, check TAA's 1968 total freight-bill estimate and AAR's 1968 revenue figure (which TAA says is close to the one it uses for rails). You discover that railroads had to haul 42% of the 1968 intercity ton-miles to get between 14% and 15% of the freight money. Does it seem that such a discovery in any way softens the potential of one trillion ton-miles?

the retarders is automatically controlled by the Abex equipment. Car wheels running over a notched rail, which extends through the retarder and 39 feet ahead of the retarder, cause vibrations which are converted by transducers into a signal indicating the speed of the car. The allowable speed through the retarders is predetermined. When the speed of the car exceeds the predetermined speed, the retarder automatically operates to slow the car down to that speed and then releases.

If the speed increases again before the car leaves the class track retarder, the retarder will operate again to slow the car.

In this manner, the retarder controls a single car or a cut of any number of cars, although there are seldom more than four cars to a cut at Balmer.

The master retarder releases cars at about 10 mph. All class track retarders are pre-set to release for a maximum coupling speed of 5 mph. Printed circuit cards in the electronic retarder controls can be changed to vary the exit speed should seasonal or other conditions require.

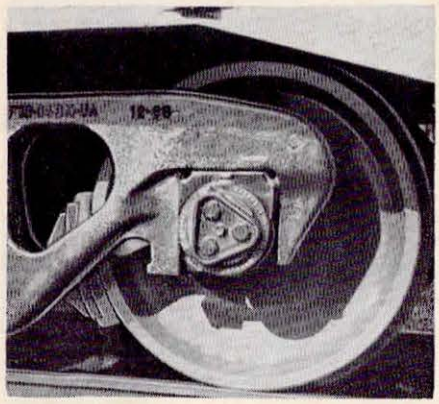
● **Power switches too.** Racor H-22 switches are controlled electronically from the hump tower. The operator pushes a button corresponding to the track destination for the car or cut, and can enter up to four routes. These routes, stored sequentially, are displayed on the panel in four route indicator windows.

As the first car reaches the first switch, all information shown in the storage windows advances, allowing room for the operator to punch in an additional route.

Once the numbers have been entered, the system takes over and routes the cars to the proper tracks automatically. Manual override at every switch provides for train moves or route changes. The system also includes switch obstruction protection, individual switch cancellation and retarder interlock to prevent humping automatically when retarders are not on.

● **Help in fog.** Because heavy fog often obstructs the tower operator's view of the yard, a Marquardt "distance to go" system has been installed. It operates on each class track. By pushing a track-selection button, the operator can get visual read-out, in feet, of the distance-to-coupling for that track. Provision is also made for distance readings to be displayed on a test panel in the relay control room on a lower level of the tower. There, retarder technicians can monitor the distance to go, and coupling speeds, to evaluate performance of retarder release speed settings. ■

NEW PRODUCTS REPORT



Roller bearing (RA-1)

The Magnus tapered freight-car roller bearing, initially being manufactured in the 6- x 11-in. and 6½ - x 12-in. sizes, has been given AAR Certificate 16 with conditional test approval for application of 1,000 carsets in interchange service. Introduction of the bearing followed five years of intensive testing and development at the Magnus advanced roller bearing production center in Cincinnati, Ohio, and complete appraisal in the AAR Research Center. Initial test applications of the bearings have been made under 25 Penn Central 70-ton box cars in automobile parts service. While presently it is being manufactured in the 70- and 100-ton configurations, Magnus expects to expand its models to include the complete size range of standard roller bearings. *Magnus Metal Corp.*

Truck spring (RA-4)

A bonded rubber/metal Lastosphere Spring which takes the place of conventional spring groups in freight-car-truck side frames has been given AAR approval for limited interchange applications in 70- and 100-ton trucks. The spherical engineered rubber section is bonded between flat metal top and bottom plates. Its elastomer is compounded to have excellent flex life, resistance to aging and ozone, and good low-temperature flexibility. Because stiffness increases in proportion to load, the same natural frequency is maintained throughout the load range. And while there is gradual stiffening, there is never solid bottoming, which is claimed to reduce vertical impacts. In lightly loaded cars the soft rate minimizes lading damage. *Lord Manufacturing Co.*

Data system (RA-2)

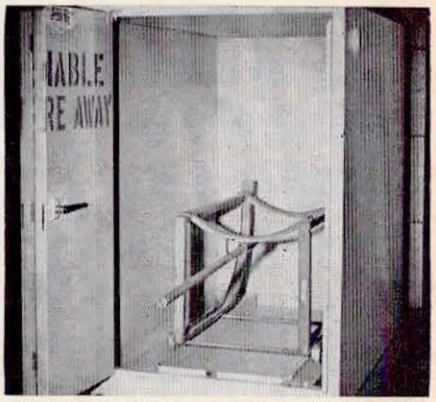
The DigiNet 150 series is a multiplex system that provides simultaneous full duplex time-sharing data communications channels on a single voice grade telephone circuit. This GE DigiNet 150 series provides up to 15 channels on a single conditioned voice grade circuit.

It will allow a communications processor in a time-sharing computer system to transmit and receive data from many remote switched-network data sets through a single 3-kilohertz telephone channel at up to 150 bits per second. Up to nine 150 baud and up to twelve 110 baud signals can be multiplexed on an unconditioned 3002 telephone channel.

The equipment also transmits necessary control signals such as ring indicator, busy out, data terminal ready and carrier detector. Solid-state multiplex equipment for a typical 12-channel DigiNet 150 series data multiplex system consists of four remote buffer units at the terminal end and four computer interface units at the computer end. *Communications Products Dept., GE.*

Wheel detector (RA-5)

A new electronic wheel detector is a bi-directional rail-mounted device for sensing the presence of car wheels. An AC unit is designed to detect car wheels at train speeds of 1 to 20 mph. A DC-operated unit is designed to detect car wheels at train speeds from 1 to 100 mph. This high-speed sensor requires 9 to 15 volts DC at 0.25 amperes and operates into a 70-ohm maximum load. *Signal & Communications division, WABCO.*



Storage cabinet (RA-3)

Drum cradle of a double-walled steel storage cabinet for protecting flammable liquids in 55-gallon drums rolls on wheels onto a double track and fits securely inside. Cradle, when pushed to rear of cabinet, leaves room inside for draining flammables from drum into containers of up to 5-gallon capacity. Cabinet, which complies with NFPA Fire Codes, is 50 in. high, 34 in. wide across front, and 50 in deep. *Justrite Manufacturing Co.*

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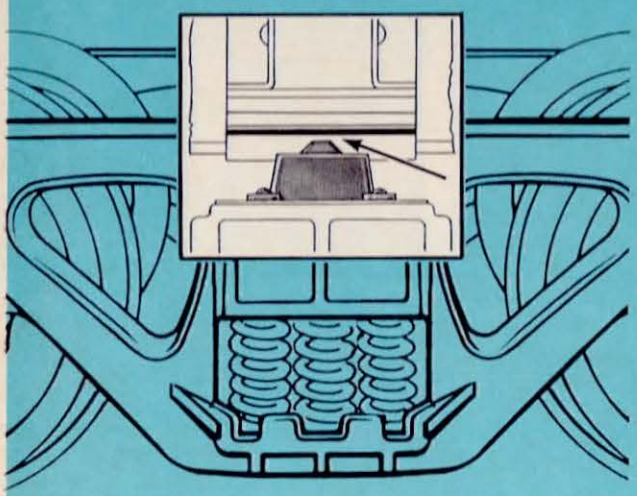

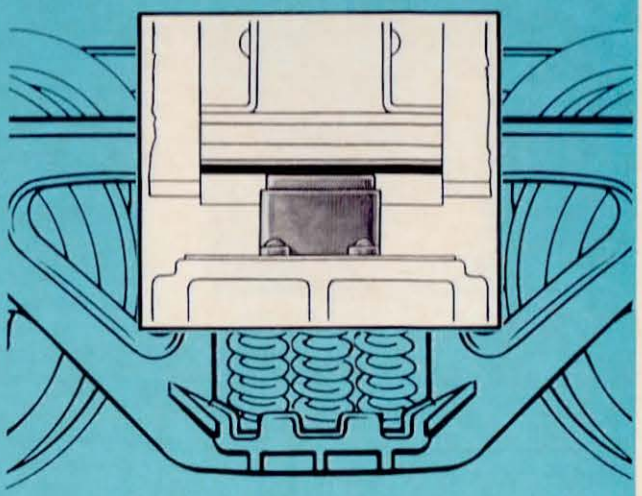

eliminate the gap with new constant contact resilient side bearings

A conventional side bearing provides for a gap between it and the car body contact on a freight car; consequently, the car can rock freely and truck can nose at high speed.

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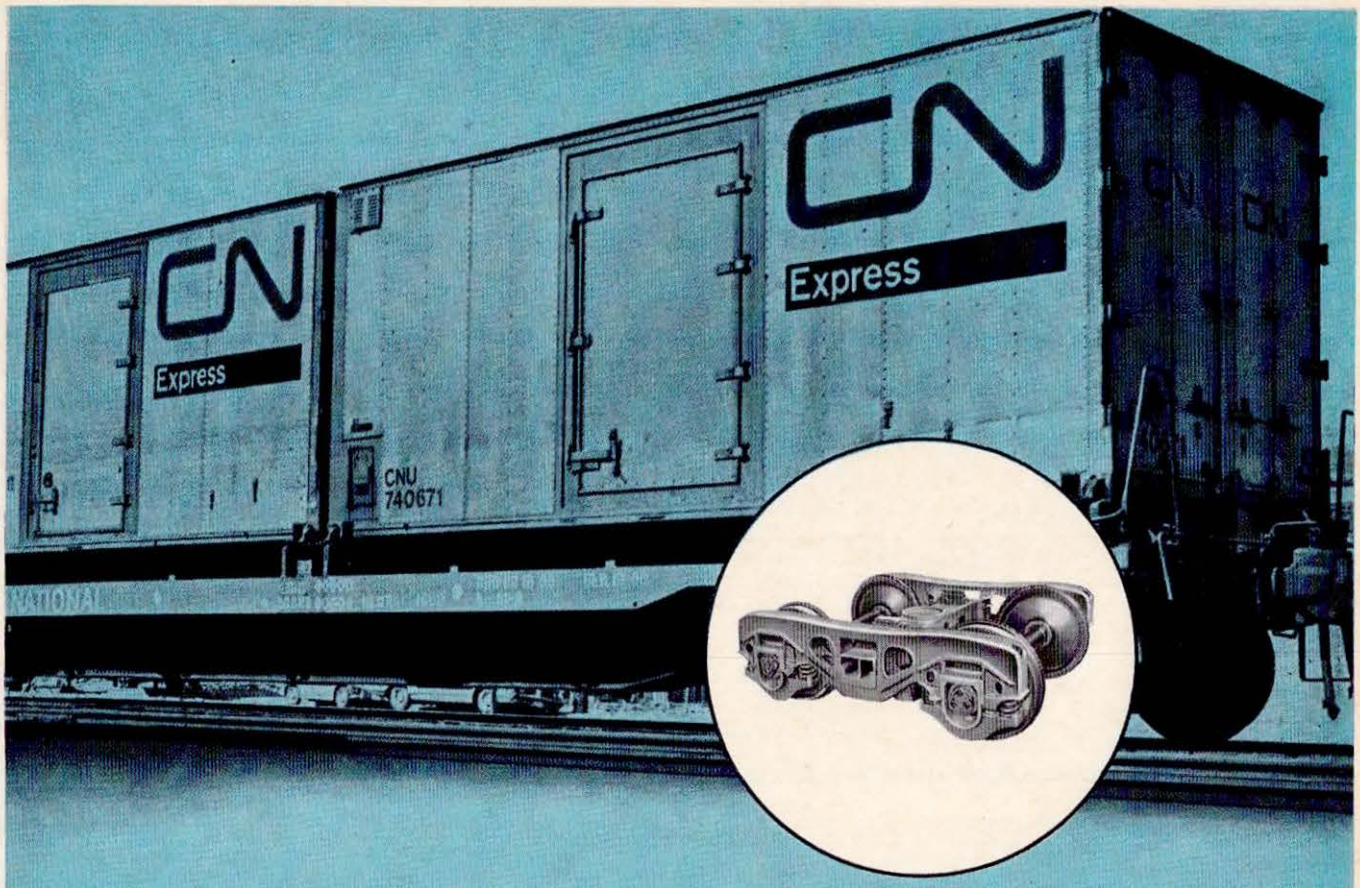

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Canadian National is extending their trials of Symington XL Trucks by equipping 25 car sets of a recent order of container flat cars similar to this one. These cars will travel at passenger train speeds and be used on their container runs between major terminals. Too, Symington's constant contact resilient side bearings being used with these XL trucks will provide even greater protection for both lading and car body.

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Circle 7 on coupon page 31

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A. Sidney Morton
C&O

Jay M. Gilmore
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Kenneth E. Smith
PC

PEOPLE IN THE NEWS

BOSTON & MAINE.—Armond Heerman, assistant vice president—marketing, Boston, Mass., named director of marketing and will head the Traffic Department.

Richard J. Sullivan, vice president—traffic, Boston, retired April 30.

CANADIAN NATIONAL.—Charles F. Armstrong appointed chief of transportation, Montreal, succeeding **J. D. Hayes,** promoted to general manager special duties. Mr. Armstrong was formerly senior transportation planning officer, with responsibility for marketing strategies, long-range facility planning, and provision for transportation engineering services. Mr. Armstrong has also been involved in development of computer-oriented management information systems relating to traffic control, such as Automatic Car Identification and the CN's "TRACS" program.

R. H. Tivy appointed assistant chief of transportation—planning, Montreal. **Stewart T. Cooke,** general superintendent transportation, Atlantic Region, Moncton, N.B., transferred to the Great Lakes Region, Toronto, Ont., succeeding Mr. Tivy. **W. P. Moffat,** assistant chief of transportation, Montreal, appointed special assistant —system, Montreal.

CHESAPEAKE & OHIO—BALTIMORE & OHIO.—Stanley M. Christovich named director, trailer service department, Baltimore, with responsibility for all C&O-B&O piggyback freight operations. He was formerly director of corporate planning for both roads. The late **Ernest W. Wright** had headed the trailer service department prior to his death on March 3.

A. Sidney Morton named coal traffic manager—sales and engineering, C&O, Richmond, Va. Mr. Morton, who had been coal traffic manager—engineering at Richmond, moves into the sales area following retirement of **Roger Thweatt** as assistant coal traffic manager after 42 years of C&O service.

PENN CENTRAL.—Jay M. Gilmore, chief regional engineer, Southern Region, Indianapolis, Ind., appointed assistant general manager of that region, succeeding

(Continued on page 39)

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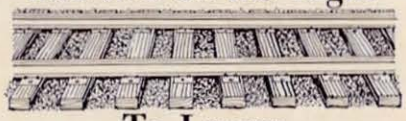

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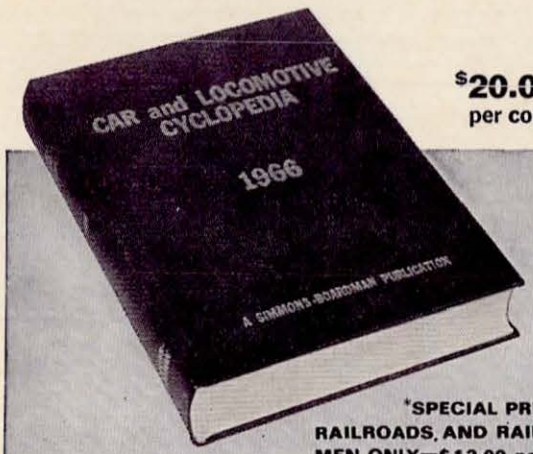

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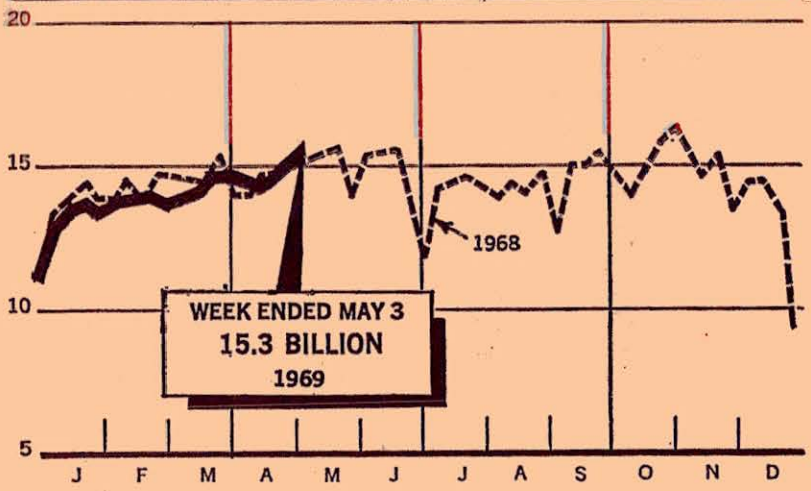
RAIL FREIGHT TRAFFIC TRENDS

BILLION TON-MILES (Estimated)



Source: Association of American Railroads

SHIPMENTS OF RAILROAD STEEL PRODUCTS

(FEBRUARY AND TWO MONTHS 1969)

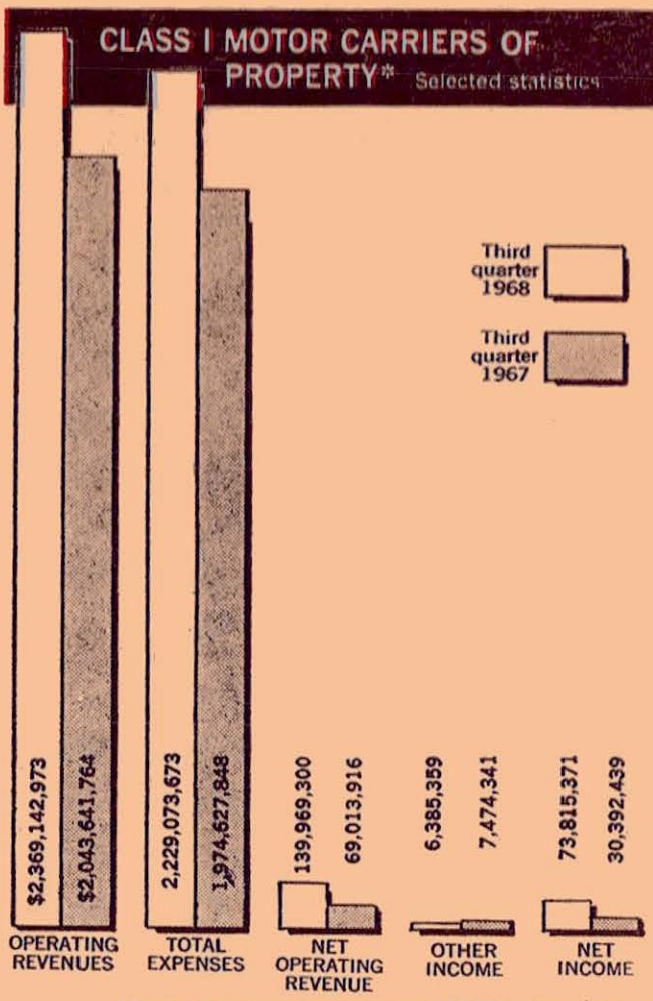
	NET TONS			
	February	Per Cent Change*	Two Months	Per Cent Change*
Rails, trackwork and equipment	105,281	+6.2	194,195	+3.6
Freight and passenger cars and locomotives	178,486	−8.5	394,429	+2.7
Street railways and rapid transit systems	1,843	−37.0	6,598	−9.9

*Per cent change compares 1969 periods with like 1968 periods.
Source: American Iron and Steel Institute.

Current Statistics

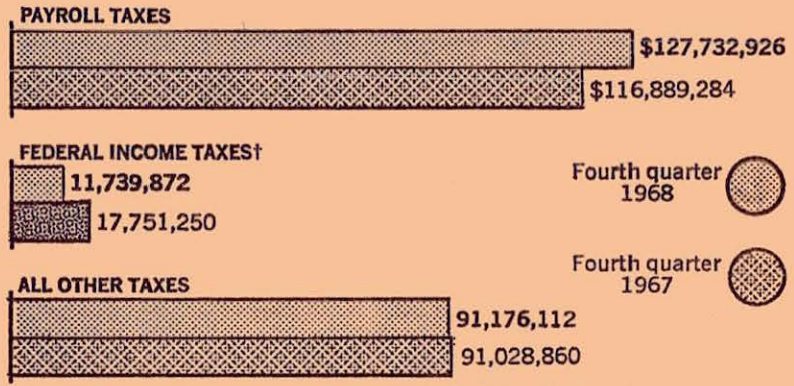
Net Income, Class I roads	
Twelve months, 1968	$593,000,000
Twelve months, 1967	$551,000,000
New freight cars on order	
April 1, 1969	34,068
April 1, 1968	22,605
New freight cars delivered	
3 mos., 1969	14,999
3 mos., 1968	16,183
Serviceable cars	
April 1, 1969	1,376,543
April 1, 1968	1,401,160

CLASS I MOTOR CARRIERS OF PROPERTY* Selected statistics



*Carriers with operating revenues of $1,000,000 or more.
Source: Bureau of Accounts, ICC. Based on reports of 1,271 intercity carriers.

RAILROAD TAXES*



*Compiled from revenues and expenses reports of 76 Class I railroads.
†Includes income tax, surtax and excess profits tax.
Source: Bureau of Accounts, ICC.

MARKET OUTLOOK

CARLOADINGS

Loadings of revenue freight in the week ended May 10 totaled 570,230 cars, the Association of American Railroads announced on May 15. This was a decrease of 12,550 cars, or 2.2% compared with the previous week; a decrease of 7,844 cars, or 1.4%, compared with the corresponding week last year; and a decrease of 5,366 cars, or 0.9%, compared with the equivalent 1967 week. Ton-miles generated by carloadings in the week ended May 10 are estimated at 15.1 billion, the same as the corresponding week of 1968, and 3.4% above the 1967 week.

REVENUE FREIGHT CARLOADINGS

Commodity	May 3 week	Preceeding week	Per cent change
Grain	19,960	20,269	— 1.5
Farm products	14,047	14,359	— 2.2
Metallic ores	42,769	35,370	+20.9
Coal	110,518	110,788	— 0.2
Crushed stone, gravel & sand	34,821	33,629	+ 3.5
Nonmetallic minerals	12,235	10,813	+13.2
Grain mill products	20,153	19,754	+ 2.0
Food & kindred products	24,909	24,227	+ 2.8
Primary forest products	26,541	25,462	+ 4.2
Lumber & wood products (except furniture)	17,472	16,384	+ 6.6
Pulp, paper & allied products	25,994	25,151	+ 3.4
Chemicals & allied products	35,067	34,892	+ 0.5
Petroleum products	10,942	10,883	+ 0.5
Stone, clay & glass products	24,169	23,464	+ 3.0
Coke	7,861	7,977	— 1.5
Metals & products	32,664	31,291	+ 4.4
Motor vehicles & equipment	23,081	24,246	— 4.8
Waste & scrap materials	15,300	15,257	+ 0.3
Forwarder & shipper assn. traffic	7,742	7,038	+10.0
All other carloads	74,509	75,849	— 1.8
LCL traffic	2,026	2,083	— 2.7
Total cars loaded	582,780	569,186	+ 2.4

CUMULATIVE TOTAL, 18 WEEKS	1969	1968	1967
	9,376,384	9,429,755	9,554,238

PIGGYBACK CARLOADINGS

U. S. piggyback loadings for the week ended May 3 totaled 26,361 cars, carrying 43,115 trailers, compared with 26,647 cars, carrying 42,307 trailers, in the corresponding 1968 week. Loadings for 1969 up to May 3 totaled 456,785 cars, carrying 749,696 trailers, compared with 444,569 cars, carrying 720,026 trailers, in the corresponding period of 1968.

IN CANADA

Cumulative	Revenue Cars Loaded	Total Cars Rec'd from Connections
April 21, 1969	1,100,275	392,740
April 21, 1968	1,065,116	381,391

FREIGHT-TRAIN CARS

● *Seaboard Coast Line.*—Has ordered 400 jumbo hopper cars and 100 rotary dump gondola cars. The cars, for hauling woodchips, will be delivered in the second quarter of 1970. SCL so far this year has ordered 1,500 new freight cars (including 1,000 70-ton, 50-ft-long box cars), all of which will be built by Pullman-Standard at Bessemer, Ala. Delivery of the box cars is to start next September and be completed in November.

● *April bad order ratio 0.1% above 1968.*—Class I roads on April 1, 1969, owned 1,451,789 freight cars, 26,136 less than on April 1, 1968, according to AAR report summarized below. Bad order ratio was 0.1% higher than last year.

	April 1, 1969	April 1, 1968	Change
Car ownership	1,451,789	1,477,925	−26,136
Waiting repair	75,246	76,765	− 1,519
Repair ratio	5.3%	5.2%	+ 0.1%

LOCOMOTIVES

● *Seaboard Coast Line.*—Has ordered 73 new diesel-electric locomotive units, bringing total new diesel units ordered this year to 133. General Electric is building 66 of the 133 at Erie, Pa., and Electro-Motive is building 67 at LaGrange, Ill. Delivery is to begin in the fourth quarter of 1969 and will be completed in January 1971.

NEW FACILITIES

● *Louisville & Nashville.*—Will build a support classification yard at Skillman, Ky., to improve service to major industries in the expanding Ohio Valley Industrial Area of Hancock County, Ky. Included in the project will be installation of a piggyback ramp.

TRANSIT

● *Massachusetts Bay Transportation Authority.*—MBTA directors have approved award of the fourth and final roadwork contract for the South Shore rapid transit extension to Quincy. The contract will be performed as a join venture of M & C Corp., Verrochi Realty Trust, Brendan Engineering Corp. and Brendan Construction Co., whose low bid was $1,586,890.25. MBTA's share of construction costs of this contract is $859,556.45; the remainder will be paid for by the city of Quincy. Also approved was an $80,525 contract for grading and drainage work along the roadbed of the Boston segment of the line. It was awarded to the low bidder, D.F. Frangioso & Co.

YOU OUGHT TO KNOW

Justice will sue to block Northwest

The Department of Justice has told Northwest Industries that the government will file suit in an attempt to block Northwest's tender offer to B. F. Goodrich stockholders. Northwest President Ben W. Heineman indicated that the move did not come as a surprise—and that "it's our intent to resist the suit."

CB&Q opens farm-country container center

What Burlington describes as "America's first container center for distribution of anhydrous ammonia fertilizer" has been opened in the heart of the Midwest farm country, at Creston, Iowa. The container concept was developed by CB&Q and General American. Joseph R. Scalzo, Burlington's market manager for minerals and chemicals, says it represents "a significant economic breakthrough for producers, dealers, farmers and the railroads." The system will permit delivery of the commodity in jumbo tank cars "at substantially lower rates than those of smaller cars." Fertilizer is then transferred to 18-ton-capacity containers which serve as both storage and transport units. Burlington says the system can be expanded to handle LPG, as well as other liquid materials.

REMSA elects new slate of officers

C. E. Godfrey of Abex Corp. is the new president of the Railway Engineering-Maintenance Suppliers Association. Also elected to office at REMSA's 1969 annual meeting were F. O. Johnson, CF&I Steel Corp., first vice president; E. J. Powell, Railway Maintenance Corp., second vice president; R. G. Wade, Fairmont Railway Motors, treasurer; and L. A. Grego, Pettibone Mulliken, secretary.

Heimbach heads railroad truck group

Kenneth G. Heimbach, market manager-forwarder TOFC of Great Northern, has been elected president of the American Railroad Truck Lines Association. Also elected were W. T. Mecouch, vice president-general manager of Pennsylvania Truck Lines to the position of vice president, and Wayne A. Noll, transportation manager of Missouri Pacific Truck Lines, to the position of secretary-treasurer.

President names John H. Reed NTSB chairman

John H. Reed, a member of the National Transportation Safety Board since its creation in 1967, has been named NTSB chairman by President Nixon. Reed succeeds Joseph J. O'Connell, Jr. Reed, 48, is a former governor of Maine. He is expected to continue NTSB activity in rail areas of grade crossings, hazardous materials movement, and train control. He will face the same problem that his predecessor did for rail matters—only 20 men for surface investigation, while there are 250 for aviation.

Cost increases force C&NW to ask higher fares

Last year, the cost of operating Chicago & North Western's suburban service rose by 7.2%—and this year, C&NW is going after a 5% fare increase, to be effective June 1. North Western puts its case this way. "Ours has become the largest unsubsidized suburban service in the country and—to the best of our knowledge—in the world. It is also unique in other respects. Our rider volume has been increasing for the past six consecutive years and the service has operated in the black for the same period. Nevertheless, our rate of return based on the value of our suburban equipment and property for rate-making purposes has not been sufficient to enable us to maintain our responsibility to you in providing the kind of service you have come to expect from us." Among the figures cited by C&NW, in addition to that 7.2% boost in operating costs: An interest rate of 7% on the most recent purchase of suburban equipment; the certainty of high interest rates on financing of 13 more cars now on order and of a new $3.8-million coach service center.

S. R. Goodman
Southern

Arthur W. Gebhardt
GRS

Louis T. Freed
GRS

Keith D. Bunnel
WABCO

(Continued from page 34)

Kenneth E. Smith, promoted to vice president and general manager, Western Region, Chicago.

SOUTHERN.—Samuel R. Goodman, assistant vice president, promoted to senior assistant vice president—marketing, remaining at Washington, D.C.

SUPPLY TRADE

Arthur W. Gebhardt has been appointed vice president—marketing, **General Railway Signal Co.,** Rochester, N.Y. **Louis T. Freed** has been named vice president-sales. Mr. Gebhardt was formerly sales manager, Outdoor Lighting Department, **General Electric Co.,** Hendersonville, N.C.

Keith D. Bunnel has been appointed vice president and group executive—transportation, **Westinghouse Air Brake Co.,** Pittsburgh, succeeding **W. P. Cartun,** who is now executive vice president, **Emhart Corp.,** Bloomfield, Conn. Mr. Bunnel will continue also as vice president and group executive—European Operations.

Leonard L. Marshall, Jr. has been appointed senior vice president, **GATX/BOOTHE CORP.** and **ARMCO/BOOTHE Corp.,** both of which constitute the newly formed **GATX-ARMCO-BOOTHE Group.** Mr. Marshall was formerly a vice president and director of **Harris, Upham & Co.**

James J. Delaney has been appointed national service manager, **Jackson Vibrators, Inc.,** with headquarters at Ludington, Mich.

Effective May 19, the general divisional office, **National Castings Division, Midland-Ross Corp.** will be at 700 South Dock Street, Sharon, Pa., 16146. The division vice president and general manager and general sales manager will move to Sharon. The engineering function will remain at 2570 Woodhill Road, Cleveland, Ohio, 44104.

Lewis E. Barickman has been appointed vice president-industrial sales and services, **Amherst Industries, Inc.,** Port Amherst, Charleston, W. Va.

William M. Graham has joined **R. L. Banks & Associates,** Inc., Washington, D. C., as chief transport analyst. Mr. Graham was formerly with Booz-Allen Applied Research, Inc.

OBITUARY

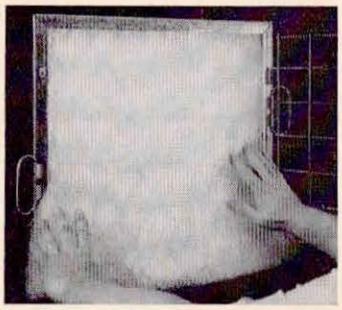
Donald Gordon, 67, who retired in Dec. 1966 as chairman and president, **Canadian National,** Montreal, died May 2 of a heart attack at his home in suburban Westmount.

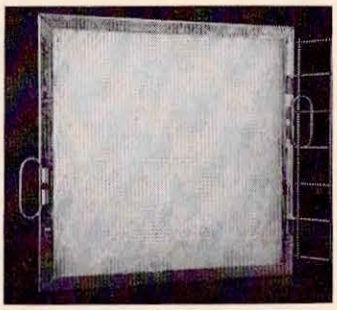
Harold L. Hamilton, 79, retired vice president, **General Motors,** and founder of **Electro-Motive Co.** which became GM's **Electro-Motive Division,** died May 3 in Palm Springs, Calif.

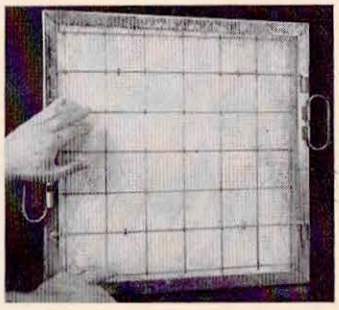
Russell E. King, 86, retired purchasing agent, **Delaware, Lackawanna & Western** (now Erie Lackawanna) died recently.

Save on filter maintenance costs

High-efficiency, low-cost AMER-kleen replaceable glass fiber filters are designed specifically for locomotive service.







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Circle 9 on couupon page 31

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Centennial speakers take a look ahead

(Continued from page 14)

Steamtown Foundation. The train stopped at a different city each night to a thunderous reception. An estimated 50,000 persons streamed past the exhibits.

The High Iron train was a success in every way except one: it lost an estimated $35,000 to $45,000. This was because it had only 86 paying passengers ($995 round trip, 15 days) against an expected 150. But High Iron President Rowland was far from downcast. "I think we've done a great job for the railroad industry," he said. "It has all been worthwhile."

The French television crew agreed. It was on the High Iron train that Claude Fayard first began to murmur his byword, "Fantastique, fantastique!"

Fantastic and famous it was . . . and a week not to have been missed. For those who did miss it, there's still a chance to see the re-enactment ceremony at Promontory. It will be performed daily this summer, beginning June 1.

● **Building on the past.** While railfans and professional historians were taking fond looks backward, the professional railroaders involved in the week's events were looking—and thinking—ahead. "Railroading Into Another Century of Progress" was the title of the symposium addres by John C. Kenefick, UP's vice president—operations, at the University of Utah. Kenefick looked to "the kind of rail network this nation should have":

"High speed schedules of today will be greatly increased—freight schedules at 90 miles per hour within the next two decades will be commonplace. To accomplish this a network of principal rights of way will have to be improved, strengthened and straightened. . . . .

"Trackside signals will disappear, giving way to cab signals and automatic control and position indication at central control points. Centralized traffic control will be further sophisticated to include not only communication with the individual operating units but also the ability to control, start and stop them. The operator will be present as monitor.

"The growth of urban areas in those places where minor population centers now stand will call for a system of key terminals associated with the market areas. Some will be noted as distribution centers, others will be agricultural collection centers, still others will be natural centers for the collection of basic raw materials. Within other areas will be a manufacturing complex around which will be grouped supporting processing plants.

"Computerized waybills will chalk up costs of movement and bill the shipper's account automatically . . . .

"Equipment to match the service will change radically. As today, there will be specialized cars to handle specific commodities, operating in units. But instead of a proliferation of special service cars as we are seeing today, it is possible we will turn to a basic unit on which will be loaded bulk packages, liquid packages, refrigerated packages which will be super-insulated with no power refrigeration needed . . . .

"Motive power will also see the effect of change. Because of high speed and control necessary, electrification holds the greatest promise of the future . . . Linear motors appear to hold great promise, inasmuch as it allows much of the weight of the motor to be deposited on the right of way with the balance of the power requirements being in the power unit. Also this system would allow short units to operate on the line, much as cases on a conveyor line, or longer, heavier coupled units . . . "

● **A brief tomorrow away.** Another symposium speaker, SP's L. E. Hoyt, vice president, executive department, also took a look ahead.

"I'm proud that the pioneers of my company conquered the geographic frontiers of the West. But I take more satisfaction in knowing that new frontiers of economic and social development continue to open before us and that we are meeting the challenge," said Hoyt.

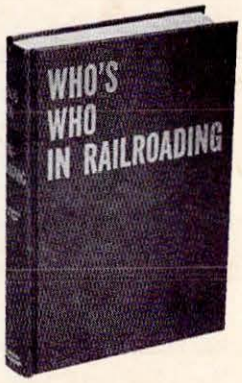
A major determinant of the railroads' future, he said, may be "the fact that the railroads possess long, thin properties—transcontinental corridors of real estate—which in this increasingly congested land of ours provide invaluable rights-of-way to move things not only by wheels but by pipelines, by wires, by conveyor belts, by vacuum, by jet propulsion, by air cushion or by who knows what else just a brief tomorrow away. Southern Pacific expects to be ready for—indeed, to participate in bringing about—these technological breakthroughs which are needed if our movement of goods and wastes and people and utilities is to avoid strangulation.

"This is a fact of life which we are constantly urging our legislators and our regulatory commissions to recognize. It is the most convincing argument we have when we insist that the railroads deserve, instead of continued harassment, a greater freedom to compete and a greater voice on planning. Our railroads must be allowed to change, at a faster pace than in the past, into uninhibited transportation companies." ■

Know your man!

How pleased you are when somebody knows who you are, where you've been, what you're doing! How pleased other people are when you know something about *them!*

You'll find the new 1968 edition of "Who's Who in Railroading" a gold mine of information about many a man important to you:



- His present title or position
- His business address and home address
- His age, marital status, family
- His career—including railroad, professional, military
- His technical society memberships, public offices held, books and articles written
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"Who's Who in Railroading" contains 6,000 entries—of which 1,500 are new in this new 16th edition. They include railroad executives, leaders in the railroad equipment and supply industries, railroad labor leaders, members of regulatory bodies, ICC personnel, transportation economists, specialists in railroad finance.

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VIEWPOINT

Let's get on with the second transport revolution

A planeload of newsmen went winging its way west, bound for Promontory and the Golden Spike ceremonies. And along with good cheer, an air of amused skepticism prevailed. "This is the most overcovered event since World War II," one reporter observed. Another chimed in: "Never have so many gone so far for the reenactment of an event that probably never happened."

But still they came. They came from all over the United States and from overseas. They came, they wrote, they photographed, they recorded. And they did all this because railroads—with all their problems—are still news, big news, sometimes hard news and sometimes soft news as represented by the pageantry at Promontory.

The theme of the great event was a simple one: The past is prologue. Perceptive newsmen found it accurate, if not original. Perceptive newsmen also caught what seemed to be a key difference between the mood of 1869 and the mood of 1969. Then, railroad men were celebrating an ending, the completion of a great task. Now, railroad men are buckling down to a beginning—the beginning of what can be called the second transportation revolution. Then, railroad men went from the driving of the golden spike into an era of railroading that would be better forgotten. Now, railroad men are directing their energies toward the forging of a whole new era in which railroad transportation will play a key role in development of multimodal systems.

One hundred years ago, railroad men awaited automatic successes. They neglected their responsibilities, and their companies and the nation suffered. In 1969, railroad men well know that there is no such thing as automatic success. They're broadening their responsibilities, restructuring their operations and investing both brainpower and dollarpower in the future.

"A GREAT CHEER WENT FORTH . . ."

One of Railway Age's ancestor publications, Western Railroad Gazette, reported the first golden spike ceremonies this way, in May of 1869: The last spike had been driven. Then, "the silence of the multitude was broken and a great cheer went forth which, while it yet quivered on the gladdened air, was caught up by the willing lightning, and borne to the uttermost parts of the earth. Cheer followed cheer for the Union of the Atlantic and Pacific, the two Pacific Railroad Companies and their officers, and the President of the United States. All was over. Glory be to God in the highest; on earth peace and good will toward men."

That was a different brand of journalism, 100 years ago—romantic, florid, given to excesses. Railway Age, in May of 1969, would approach the centennial ceremonies more like this: Drive the spike, shove the two locomotives together, and we've got time for one quick cheer. Then, move out: All is far from over. There's a transportation revolution to be planned, a transportation revolution to be executed. There's work to be done, lots of it So let's get on with it.

Freight car axles with higher fatigue strength now supplied by U. S. Steel

Trends toward larger freight cars and higher operating speeds have intensified the problem of possible fatigue failures of railroad car axles. As a result, we undertook to thoroughly study and test the effect of axle body surface finish on fatigue. Our aim was to determine the type of machined finish that would provide optimum resistance to fatigue failure.

On the basis of the study findings, we now machine axle bodies to a finish with an average (root mean square) maximum roughness of 100 microinches. This surface finish imparts much higher fatigue strength (as shown in the graph at right) which results in greater reliability for USS axles.

Here is a summary of the findings of the study:

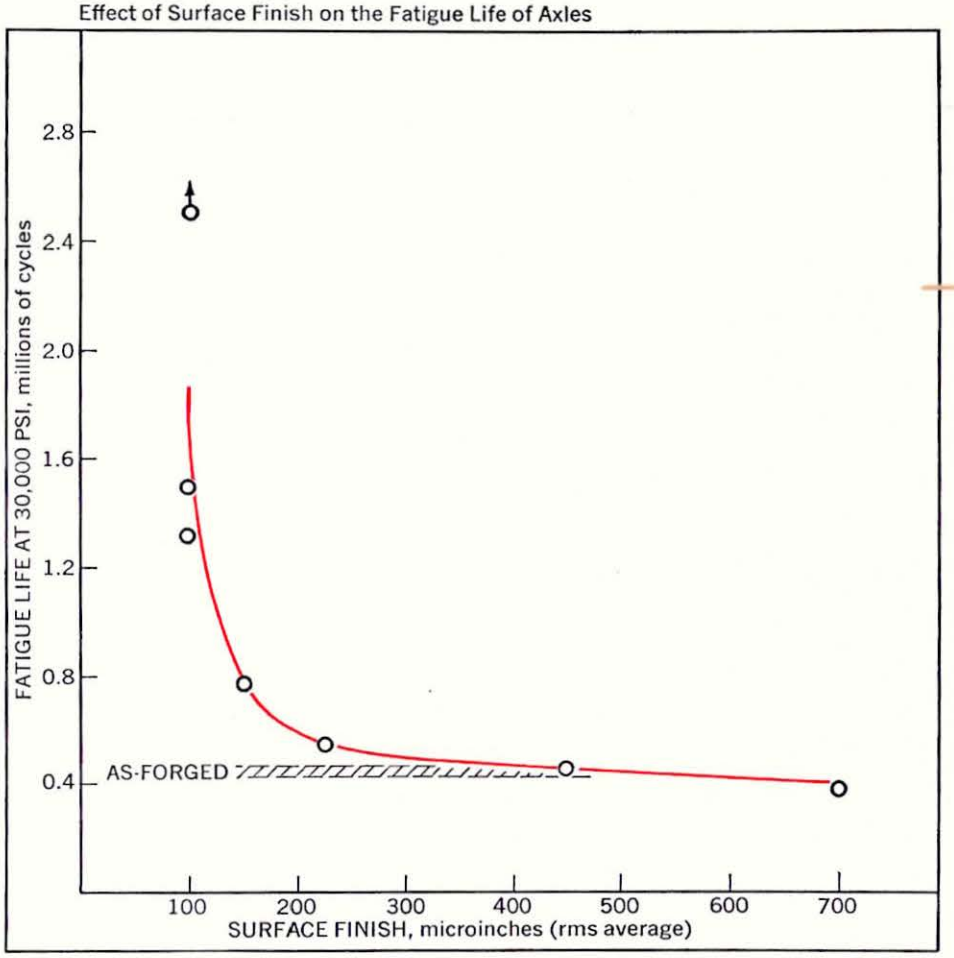
1. For the range of surface finishes studied, the finer the surface finish, the greater was the fatigue strength of the axles, see graph.

2. At stress levels of 30,000 and 40,000 psi, full-size axles machined to surface finishes of 100 microinches average exhibited fatigue life at least twice that of as-forged axles.

3. Axles with machined surface finishes of 350 microinches average or rougher exhibit fatigue properties poorer than those of as-forged axles.

A copy of the Technical Report on this project is available from United States Steel, Box 86 (USS 5845), Pittsburgh, Pennsylvania 15230.

Effect of Surface Finish on the Fatigue Life of Axles



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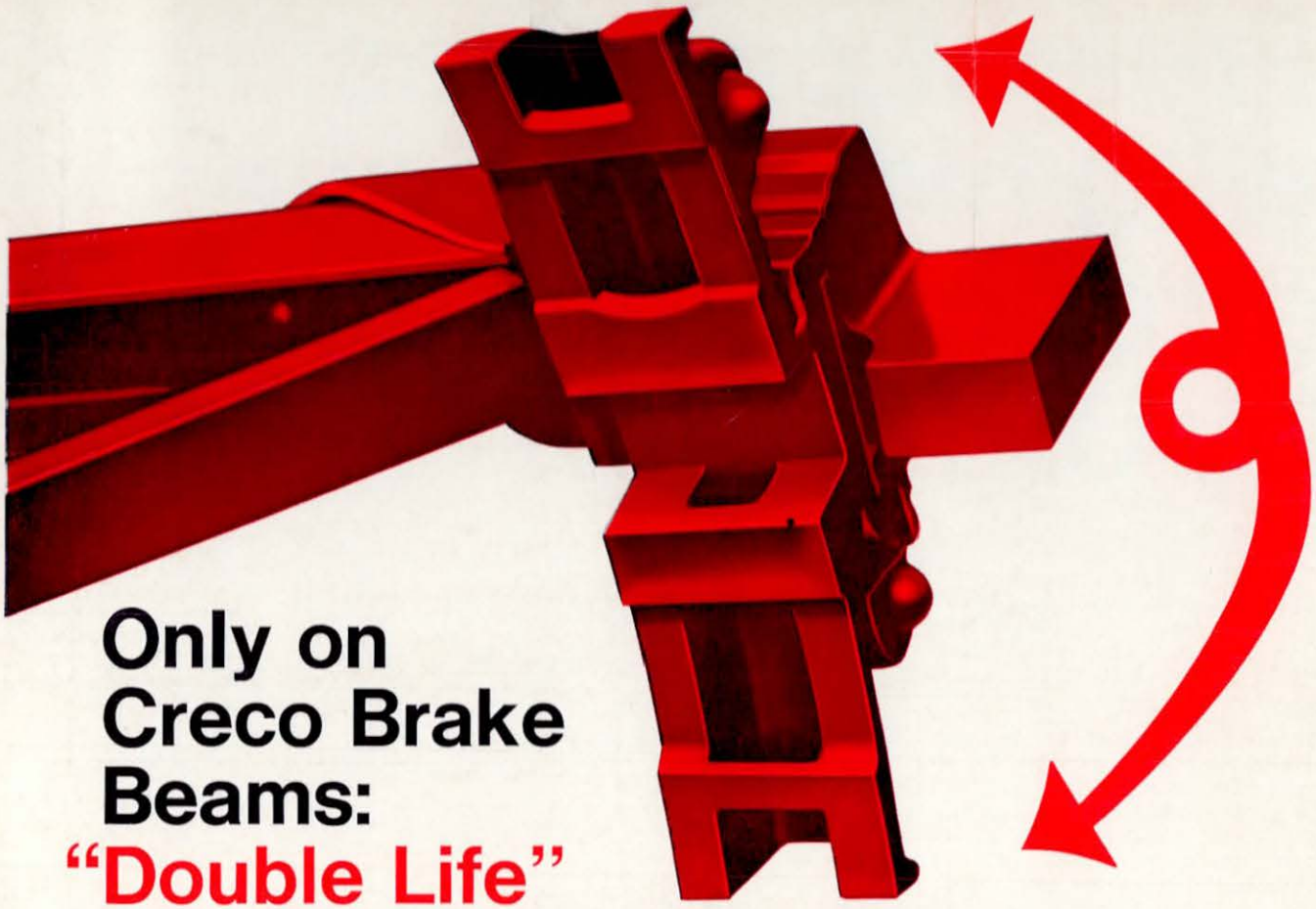

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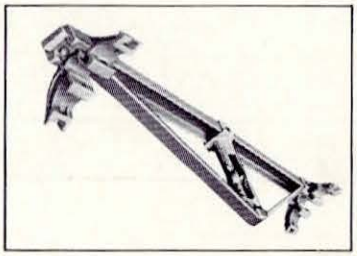

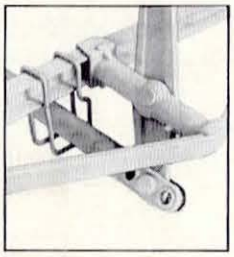

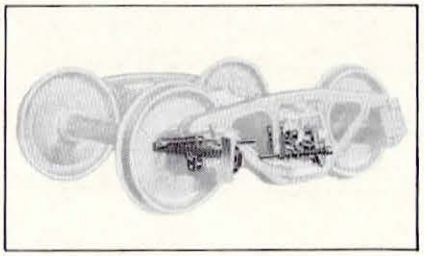

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